COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

"Creating Community Through People, Parks and Programs"

Russ Guiney, Director

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

37 MAY 31, 2011

SACHI A. HAMAI
EXECUTIVE OFFICER

May 31, 2011

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

APPROVAL OF AN AGREEMENT WITH THE STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES TO CREATE A DREISSENID MUSSEL INSPECTION AND EDUCATION PROGRAM AT CASTAIC LAKE AND PYRAMID LAKE (SUPERVISORIAL DISTRICT 5) (3 VOTES)

SUBJECT

Request Board approval authorizing the Director of the Department of Parks and Recreation to enter into an agreement with the State of California Department of Water Resources to provide services relative to the implementation of a dreissenid mussel inspection and education program at Castaic Lake and Pyramid Lake. The Department will be fully reimbursed for providing these services.

IT IS RECOMMENDED THAT YOUR BOARD:

1. Find the proposed action is categorically exempt from the California Environmental Quality Act according to Sections 15308 and 15309 of the State California Environmental Quality Act Guidelines, and Classes 8 and 9 of the Environmental Document Reporting Procedures and Guidelines, adopted by your Board on November 17, 1987 because the project is considered an action to protect or enhance the environment and consists of activities limited to inspections.

2. Approve and adopt the attached Resolution authorizing the Director of Parks and Recreation, as an agent for the County of Los Angeles, to accept and execute an Agreement with the State of California Department of Water Resources, effective July 1, 2011 through June 30, 2014 in the maximum amount of $1,798,347 for the purpose of providing services relative to a dreissenid mussel inspection and education program at Castaic Lake and Pyramid Lake.

3. Delegate authority to the Director of Parks and Recreation, or his designee, to execute the

agreement and all future amendments, modifications, extensions, renewals and augmentations to said agreement if it is deemed necessary and in the best interest of the County of Los Angeles.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The potential spread of the non-native dreissenid mussels to Los Angeles County is a significant concern due to the negative economic impacts associated with their introduction and proliferation in freshwater bodies of water. These mussels cause great economic damage when they infest pipes, pumps, or other components of municipal and industrial water supply systems or power plant cooling systems. In addition to the potential damage on water purveyance systems, these mussels can seriously disrupt and negatively affect the ecosystem of freshwater lakes and rivers. Once a water system is infested, the costly measures required to eradicate these mussels can have serious detrimental effects on the recreational aspects of a freshwater lake or river system.

Presently, the Department of Parks and Recreation, (Department) has implemented screening interviews and inspection protocols to prevent the introduction of the mussels through infested boats that recreate at Castaic Lake. Under the current program, watercraft whose owners have indicated that they have recently recreated in an infected waterway must pass an inspection prior to launching. However, this approach has two primary limitations affecting State of California (State) lakes operated by the County of Los Angeles: it assumes that all information provided during the screening interview is credible, and there is no current screening or inspection program in place at Pyramid Lake, which is located just 16 miles to the north and is the source of water for Castaic Lake. Although the Los Angeles County Sheriff's Department currently provides public safety services at Pyramid Lake, there is no watercraft inspection program in place at this time.

The Department requests Approval of Agreement Number 4600009252 (Attachment I) with the State of California Department of Water Resources to implement a comprehensive mussel prevention program which will be fully reimbursed by the State. This program will enable the Department to inspect every watercraft allowed to launch at Castaic Lake and Pyramid Lake.

Implementation of Strategic Plan Goals

The recommended agreement will further the County's Strategic Plan Goals of Operational Effectiveness (Goal 1) through the provision of quality recreational services at a savings over County costs, and Community and Municipal Services (Goal 3) by enriching the lives of County residents and visitors by ensuring quality regional open space, recreational and public works infrastructure services for County residents and deliver customer-oriented municipal services to the County's diverse unincorporated communities.

FISCAL IMPACT/FINANCING

The proposed agreement will provide a maximum of $1,798,347 for program costs from the State Department of Water Resources to allow the Department to implement a comprehensive dreissenid mussel inspection and education program through June 30, 2014. There is no Net County Cost resulting from this action.

OPERATING BUDGET IMPACT

Funding needed for the Fiscal Year 2011-12 Dreissenid Mussel Inspection and Education Program

will be included in the Final Adopted Budget at no Net County Cost.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The attached Resolution approves the Agreement and delegates authority to the Director of Parks and Recreation to execute the Agreement on behalf of the County of Los Angeles.

County Counsel has reviewed and approved the attached Resolution and Agreement as to form. Upon Board approval, the Contract will be in effect for a period of 36 months commencing July 1, 2011 through June 30, 2014.

ENVIRONMENTAL DOCUMENTATION

The proposed project is categorically exempt from California Environmental Quality Act (CEQA) according to Sections 15308 and 15309 of the State CEQA Guidelines, and Classes 8 and 9 of the Environmental Document Reporting Procedures and Guidelines, adopted by your Board on November 17, 1987 because the project is considered an action to protect or enhance the environment and consists of activities limited to inspections.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Each watercraft allowed to launch at Castaic Lake or Pyramid Lake will undergo a thorough inspection by a trained Department staff member. The watercraft will be required to be clean of all debris and completely dry and should not have recreated in an infected lake within seven days prior to launching at Castaic Lake or Pyramid Lake. Watercraft that fails inspection will be prevented from launching.

Once a watercraft has been deemed safe and granted lake access, Department staff will apply "bands" connecting the watercraft to the trailer when the vessel exits the lake. This will ensure the inspected vessel is not used between launchings and upon return to Castaic Lake or Pyramid Lake, watercrafts with intact bands can bypass future inspections. This certification program will ensure that all watercraft have been thoroughly inspected, avoid redundant screening and reduce processing time by allowing staff to concentrate on watercraft that have not been previously inspected.

This watercraft inspection and certification program will increase resource protection and reduce waiting time for boaters who regularly visit Castaic and Pyramid lakes. The approval of this agreement is part of the Department’s continuing effort to provide the best possible service to the public in a cost-effective manner. Based on data from similar inspection programs in Southern California, it is estimated that anywhere between two percent and 11 percent of watercraft attempting to launch at Castaic Lake and Pyramid Lake will fail inspection.

CONCLUSION

Upon approval by your Board, please instruct the Executive Office Clerk of the Board to forward two adopted copies of this letter to the Department of Parks and Recreation.

Respectfully submitted,

RUSS GUINEY
Director

RG:HS:hm

Enclosures

c: Chief Executive Officer
County Counsel
Executive Officer, Board of Supervisors

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
RESOLUTION

WHEREAS, dreissenid mussels are non-native aquatic nuisance freshwater mollusks that can survive in water carried by recreational boats in bilges and live wells and can be transported from one body of water into another; and

WHEREAS, dreissenid mussels, once introduced into a body of freshwater, can clog waterways, undermine healthy lake ecosystems, and create costly maintenance for water resource agencies; and

WHEREAS, these mussels can also have detrimental impacts on boating and fishing and other recreational activities as well as cause negative spillover effects on local businesses that derive economic benefits from these recreational activities; and

WHEREAS, the Board of Supervisors of the County of Los Angeles desires to reduce the potential for introduction of dreissenid mussel species into Castaic Lake and Pyramid Lake; and

WHEREAS, the Board of Supervisors of the County of Los Angeles desires to undertake a Dreissenid Mussel Inspection and Education Program at Castaic Lake and Pyramid Lake to be financed with funds made available from the State of California Department of Water Resources (DWR); and

WHEREAS, procedures established by DWR require the Board of Supervisors of the County of Los Angeles to certify, by resolution, the authorization to enter into and execute a contract agreement.

NOW, THEREFORE BE IT RESOLVED, that the Director of the Department of Parks and Recreation is authorized to sign and accept, on behalf of the County of Los Angeles and the Board of Supervisors of the County of Los Angeles, Agreement No. 4600009252 in the amount of $1,798,347.00 from DWR, including any extensions, amendments, modifications or augmentations thereof, and any subsequent contract or grant renewal with the State in relation thereto.

BE IT FURTHER RESOLVED, that the Director of Parks and Recreation is authorized to agree to the funding terms and conditions of the DWR agreement including any amendment thereof.

THE FOREGOING RESOLUTION was approved on the 31st day of May, 2011 adopted by the Board of Supervisors of the County of Los Angeles and ex officio the governing body of all other special assessment and taxing districts, agencies, and authorities for which said Board so acts.

SACHI A. HAMAI
Executive Officer-Clerk
Of the Board of Supervisors of
the County of Los Angeles

By: Lachelle Smitherman
Deputy

APPROVED AS TO FORM
ANDREA SHERIDAN ORDIN
County Counsel

By:
Jill M. Jones
Deputy County Counsel

STATE OF CALIFORNIA
STANDARD AGREEMENT
STD 213 (Rev 06/03)

AGREEMENT NUMBER
4600009252
REGISTRATION NUMBER

1. This Agreement is entered into between the State Agency and the Contractor named below:

STATE AGENCY'S NAME
Department of Water Resources

CONTRACTOR'S NAME
Los Angeles County Department of Parks and Recreation

2. The term of this Agreement is: July 1, 2011 through June 30, 2014
This Agreement will not become effective until approved by the Department of General Services.

3. The maximum amount of this Agreement is: **$1,798,347.00**
One Million Seven Hundred Ninety-Eight Thousand Three Hundred Forty-Seven Dollars and No Cents

4. The parties agree to comply with the terms and conditions of the following exhibits which are by this reference made a part of the Agreement.

Exhibit A – Scope of Work	3 pages
Attachment 1, County of Los Angeles Department of Parks and Recreation Proposed Quagga Mussel Interception Program, Castaic Lake & Pyramid Lake	5 pages
Attachment 2, Quagga Mussel Inspection Program (Pilot) Summary Report	9 pages
Attachment 3, Recommended Uniform Minimum Protocols and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States	53 pages
Attachment 4, Watercraft Inspection and Decontamination Interception Training for Zebra/Quagga Mussels - Level One	10 pages
Exhibit B – Budget Detail and Payment Provisions	1 page
Attachment 1, Cost Sheet	3 pages
Exhibit C* – General Terms and Conditions	GTC 610
Exhibit D – Special Terms and Conditions for DWR (DWR 9546, Rev. 12/10)	3 pages
Attachment 1, Recycled Content Certification (DWR 9557, Rev. 1/09)	2 pages

Items shown with an Asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto. These documents can be viewed at www.ols.dgs.ca.gov/Standard+Language

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME *(if other than an individual, state whether a corporation, partnership, etc.)*
Los Angeles County Department of Parks and Recreation

BY *(Authorized Signature)* — DATE SIGNED *(Do not type)*

PRINTED NAME AND TITLE OF PERSON SIGNING
Russ Guiney, Director

ADDRESS
~~265 Cloverleaf Drive~~ 433 South Vermont Avenue
~~Baldwin Park, California 91706~~ Los Angeles, CA 90020

STATE OF CALIFORNIA

AGENCY NAME
Department of Water Resources

BY *(Authorized Signature)* — DATE SIGNED *(Do not type)*

PRINTED NAME AND TITLE OF PERSON SIGNING
Carl A. Torgersen, Chief, Division of Operations and Maintenance

ADDRESS
1416 Ninth Street, Room 605-1
Sacramento, California 95814

Approved as to legal form and sufficiency:
Asst Chief Counsel, DWR

California Department of General Services Use Only

SCOPE OF WORK

1. Introduction

This Agreement will assist the Los Angeles County Department of Parks and Recreation (LACDPR) and the Department of Water Resources (DWR) in reducing the potential for introduction of non-native Dreissenid mussel species into areas of the State Water Project (SWP) by focusing on regulating vector points-of-entry and public education. LACDPR implemented a watercraft screening program at Castaic Lake, in which vessels were evaluated for their potential to harbor Dreissenid mussels based on the vessel owners' responses to a series of questions. The program did not include physical inspection of watercraft. With funding assistance from DWR, LACDPR will implement a comprehensive watercraft inspection program that will include physical inspections of all watercraft for mussels or potential mussel-infested water at Castaic and Pyramid Lakes. It will be modeled after the California Department of Parks and Recreation (DPR) mussel inspection programs to maintain consistency among State Water Project (SWP) reservoirs.

2. Work to Be Performed

A. LACDPR will implement a Dreissenid Mussel Inspection and Education Program at Castaic Lake and Pyramid Lake as described in "County of Los Angeles Department of Parks and Recreation Proposed Quagga Mussel Interception Program, Castaic Lake & Pyramid Lake" (Exhibit A, Attachment 1).

B. Areas covered under this agreement are as follows:

Castaic Lake – Lagoon (east) Launch Ramp, West Launch Ramp, Main Launch Ramp
Pyramid Lake – Emigrant Landing Launch Ramp, Vaquero Launch Ramp

C. LACDPR will model the Dreissenid Mussel Inspection and Education Program after the programs implemented at Perris and Silverwood Lakes by DPR. DPR implemented their Quagga Mussel Inspection Program in 2008, which has served as a model for other mussel inspection programs in the Western United States (Exhibit A, Attachment 2).

D. The program will be implemented within five months of contract start date and phased in over a 10-month period from contract start date. Staff will be hired within three months of contract start date. The first three months of program implementation will focus on public education of new requirements, followed by full program implementation. Full program implementation will be completed

within 10 months of contract start date. The fully implemented program will meet "Level 3" standards as defined and described in "Recommended Uniform Minimum Protocols and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States" (Exhibit A, Attachment 3).

E. The inspection program will consist of specially trained LACDPR staff who will ask a series of questions of each boater, conduct physical inspections of each vessel that enters the park, and document those inspections. Vessels that fail inspection will not be allowed to launch into the lake. The vessel must remain dry for 7 days. Vessels that are granted lake access receive a band after exiting the lake. The band secures the boat to the trailer and ensures the boat has not been launched between visits. Boats with bands can bypass future inspections.

F. Specially trained LACDPR staff will inform and educate park visitors of the Dreissenid mussel threat and how they can help prevent the spread. Outreach methods include signage, handouts, and personal contact.

G. LACDPR staff dedicated to the watercraft inspection program will consist of Cashier Clerk and Lake Lifeguard classifications. Minimum age is 18 years. Watercraft inspection staff will not carry out duties of other positions while assigned to boat inspection and banding duties.

H. All staff conducting inspections must complete the "Watercraft Inspection and Decontamination Interception Training (WIT) For Zebra/Quagga Mussels – Level One" program (Exhibit A, Attachment 4). Training will be conducted by staff or other persons who have completed the "WIT – Level Two" program and are Certified Level Two Watercraft Inspection Trainers. Level One training will be completed within two months of hiring.

I. Watercraft inspections will occur during normal operating hours when the lakes are open for boating activity.

J. LACDPR will provide quarterly reports to accompany invoices. The quarterly reports should include the number of staff hired and trained and the number of boats inspected.

K. Funds must be used for new positions and for equipment expenses directly related to carrying out the inspection program.

L. LACDPR will provide a yearly program summary report to DWR and to DPR. The report will include monthly and yearly statistics on number of boats inspected, number of boats that failed inspection, and number of boats with visible mussels. A copy of this report will be provided to:

California Department of Parks and Recreation
Concessions, Reservations and Fees Division
P. O. Box 942896
Sacramento, CA 94296

California Department of Water Resources
Attn: Tanya Veldhuizen, Room 620
Division of Operations and Maintenance
P. O. Box 942836
Sacramento, CA 94236

M. Work shall be in accordance with this Scope of Work and the Cost Sheet, marked as Exhibit B, Attachment 1, which is attached hereto and incorporated herein

3. Project Representatives

The project representatives for this Agreement are:

DWR:

Tanya Veldhuizen
Environmental Assessment Branch
Division of Operations and Maintenance
1416 Ninth Street, Room 620
Sacramento, CA 95814
(916) 657-3609
tanyav@water.ca.gov

LACDPR:

Hayden Sohm
Deputy Director
Los Angeles County Department of Parks and Recreation
265 Cloverleaf Drive
Baldwin Park, CA 91706
(626) 369-8693
hsohm@parks.lacounty.gov

The project representatives for this Agreement may be changed by written notice to the other party.

County of Los Angeles
Department of Parks and Recreation
Proposed Quagga Mussel Interception Program
Castaic Lake & Pyramid Lake

November 2010
(Revised April 11, 2011)

Hayden Sohm
Deputy Director, Regional Facilities Agency
County of Los Angeles
Department of Parks and Recreation

BACKGROUND

Dreissenid mussels are non-native aquatic nuisance freshwater mollusks which originated in Eastern Europe. These mussels clog waterways, undermine healthy lake ecosystems, and create costly maintenance for water resource agencies. They were introduced into the Great Lakes region in 1988 through ballast water emptied from ships and have spread throughout the Midwest and the eastern portion of the United States.

Zebra mussels were discovered in San Justo Reservoir in San Benito County in January 2008; no other Zebra mussels have been detected in California. Quagga mussels were first discovered in California in Lake Mead and the Colorado River system in January 2007 and have spread to Southern California lakes connected to the Colorado River. The spread of the Quagga mussel in Southern California is believed to have advanced through aqueducts and canals via water conveyance systems sourced through the Colorado River. Not only can these invasive mussels pass through the water conveyance process, they can also be spread by two alternative methods: (1) Via adult mussels that have adhered to surfaces, such as boat hulls, and are introduced to a water body or system; and (2) Via microscopic larval forms, or "veligers", that live in the water column and can survive in water carried by recreational boats in bilges, live wells, and other boat areas where water can pool and remain, and are transported into a water body or conveyance system.

Economic Impact

The spread of the Quagga mussel in California is a significant concern due to the negative economic impacts associated with their introduction and proliferation. Quagga mussels cause the greatest economic damage when they infest pipes, pumps, or other components of municipal and industrial water supply systems or power plant cooling systems. In addition to the potential damage on water purveyance systems, Quagga mussels can seriously disrupt and negatively affect the ecosystem of freshwater lakes and rivers. Once a water system is infested, the measures required to eradicate the Quagga mussel can have serious detrimental effects on the recreational aspects of a freshwater lake or river system. In addition, preventative measures taken such as screening, inspection, and decontamination of boats, along with outright banning of boating, can also have detrimental impacts on boating and fishing and other recreational activities, as well as cause spillover effects on local businesses that derive economic benefits from these recreational activities.

LIMITATIONS TO CURRENT INTERCEPTION PROGRAM

The Los Angeles County Department of Parks and Recreation has implemented screening interviews and inspection protocols to prevent the introduction of the mussels through infested boats that recreate at Castaic Lake. Watercraft whose owners have indicated that they have recently recreated in an infected waterway must pass an inspection prior to launching. However, this approach has two primary limitations: (1) it assumes that all information provided during the screening interview is credible and (2) there is no screening or inspection program in place at Pyramid Lake, which is located just 16 miles to the north, and is the source of water for Castaic Lake. A more comprehensive mussel prevention program is more expensive to maintain and will require approximately $606,000 in additional funding.

PROPOSED VESSEL INSPECTION AND CERTIFICATION PROGRAM

The Los Angeles County Department of Parks and Recreation proposes the creation of a comprehensive vessel inspection program that will ensure that all watercraft attempting to launch at Castaic Lake State Recreation Area and Pyramid Lake will be thoroughly inspected prior to launching. This Vessel Inspection and Certification Program will increase resource protection and reduce waiting time for boaters who regularly visit our lakes.

Each vessel attempting to launch at our Lakes will undergo a thorough inspection by a trained staff member. The vessel will be checked for water in any form, (flowing or standing water) the inside and outside of the vessel will be required to be clean of all debris and completely dry, free of any moisture. Boats that fail inspection will be prevented from launching.

Once a vessel has been deemed safe, our staff will apply "bands" that connect the watercraft to the trailer so that it cannot be used between launching at our County Lakes without detection. This certification program will ensure that all craft have been thoroughly inspected, avoid redundant screening and reduce processing time by allowing staff to concentrate on watercraft that have not been previously inspected. Banding will be coordinated between the County boating lakes so that launching at all County facilities can be expedited so long as the "band" remains intact. With the cooperation of other municipalities, this program may be expanded to include multiple jurisdictions.

Protocols:

1. All vessels permitted to launch at Castaic Lake or Pyramid Lake will be inspected by a trained staff member for Quagga and Zebra Mussels. This includes all canoes, kayaks, sail boats, rubber rafts, fishing waders, float tubes, etc.
2. If a vessel is coming from an infected body of water, the owner must wait 7 days before bringing it to Castaic Lake or Pyramid Lake.
3. Only clean, drained, and dry boats and equipment will be acceptable for inspection upon arrival.
4. If a boat or any object, including but not limited to sails, life vests, and skis, on a boat is wet, damp, or moist, the vessel will be excluded for 7 days.
5. If a vessel coming from an infected body of water has not waited 7 days before bringing it to Castaic Lake or Pyramid Lake, the vessel will automatically be excluded for 7 days.
6. Only watercraft that have passed inspection will be allowed to launch.
7. Certification "banding" will be applied by a trained staff member as the vessel exits Castaic Lake or Pyramid Lake.
8. Watercraft that have been certified and banded by County staff utilizing uniform inspection and screening protocols will receive expedited processing on a return visit.

Staffing Requirements:
The County is proposing to utilize two employee classifications for this program:

The Cashier Clerk is a seasonal employee classification whose duties are primarily associated with fee collection. The minimum age for employees in this assignment will be 18.

The Lake Lifeguard is a seasonal employee classification with considerable training and experience conducting vessel safety inspections. This employee is knowledgeable in boating safety regulations; equipment requirements as well as local ordinances related to boating and would assist in conducting vessel inspections on weekends and holidays during the peak-season. This employee also has limited law enforcement authority and is better suited to deal with recalcitrant patrons. Minimum age requirement for this classification is 18.

Castaic Lake
The Castaic Lake State Recreation Area is comprised of two lakes, the Castaic Main Lake and the Lower Lagoon. The Castaic Main Lake has two launch ramps. The East Launch Ramp is open daily from sunrise to sunset and the West Launch Ramp is open on weekends and holidays from sunrise to sunset during the peak season. The Lower Lagoon has one launch ramp that is open daily from sunrise to sunset.

Off-Season and Peak-Season Weekday Staffing: There would be one cashier clerk assigned to inspect boats and an additional cashier clerk assigned to apply "bands" to boats as they exit the water. The inspection and "banding" of vessels exiting the Lower Lagoon will be carried out by County staff using existing resources.

Peak-Season Weekend and Holiday Staffing: There would be one Cashier Clerk and one Lake Lifeguard assigned to inspect boats at the Main Launch Ramp. There would be one cashier clerk assigned to inspect boats at the West Launch Ramp. There would be one cashier clerk at the Main Launch Ramp and another cashier clerk at the West Launch Ramp assigned to apply "bands" to boats as they exit the water. The inspection and "banding" of vessels exiting the Lower Lagoon will be carried out by County staff using existing resources.

Pyramid Lake
The Pyramid Lake facility is comprised of one lake with two points of entry.

Off-Season and Peak-Season Weekday Staffing: At each point of entry, there would be one cashier clerk assigned to inspect boats and an additional cashier clerk assigned to apply "bands" to boats as they exit the water.

Peak-Season Weekend and Holiday Staffing: At each point of entry, there would be one Cashier Clerk and one Lake Lifeguard assigned to inspect boats and an additional cashier clerk assigned to apply "bands" to boats as they exit the water.

Summary of Projected Labor Costs

FACILITY	JOB TITLE	STAFF HOURS	HOURLY RATE	Total
Castaic Lake				
	Cashier Clerk	11,736	$14.29	$176,707
	Lake Lifeguard	790	$22.31	$ 17,625
				$185,332
Pyramid Lake				
	Cashier Clerk	15,610	$14.29	$223,067
	Lake Lifeguard	1,804	$22.31	$ 40,247
				$263,314
			Sub Total	**$448,646**
25% Admin Overhead				**$112,162**
Total Staffing Costs				**$560,807**

Summary of Projected Operational Costs

1st YEAR COSTS				
Services & Supplies 1st Year Costs			S&S Sub Total	$8,668.88
			Tax 9.75%	$ 845.22
TOTAL 1ST YEAR COSTS				**$9,514.10**

ONGOING COSTS				
Services and Supplies Ongoing Costs			S&S Sub Total	$16,355.00
			Tax 9.75%	$1,594.61
			S&S TOTAL	17,949.61
Vehicle Fuel & Maintenance	61 mi./day	23,360 mi	$ 0.75 usage rate	17,520.00
TOTAL ONGOING COSTS				**$35,469.61**

Cross-Jurisdictional Reciprocity

The County of Los Angeles is hopeful that this program will be part of a successful collaboration with other local water resource and recreation agencies to implement a region-wide certification program that may be acceptable to most agencies/organizations in Southern California. If so, we feel that all agencies participating in this effort should, at minimum, meet the following criteria:

1. Only watercraft or equipment that have passed inspection or have been or quarantined in accordance with protocols similar to the ones mentioned in this proposal should receive certification "banding".
2. Certification banding should only be applied by a trained inspector.
3. Watercraft and equipment that have been certified and "banded" by an agency or organization utilizing these protocols and standards would receive expedited processing at the discretion of the receiving agency/organization.

Quagga Mussel Inspection Program (Pilot) Summary Report
California Department of Parks and Recreation
Park Operations
July 1, 2008 – June 30, 2010

Executive Summary

The California Department of Parks and Recreation (DPR) received $1.413 million in the 2008-2009 budget (budget item 3790-001-0516) to conduct a two year pilot program for inspection and education related to the Quagga mussel threat at its recreational operated reservoirs (reservoirs).

The California Department of Boating and Waterways (DBAW) funded the pilot program through dedicated funds. With concurrence from DBAW and the Department of Finance (DOF), DPR elected to conduct an active inspection program at two of its reservoirs in Southern California (Lake Perris SRA and Silverwood Lake SRA), and continued education efforts at other DPR reservoirs in the state. This decision was based on the following factors:

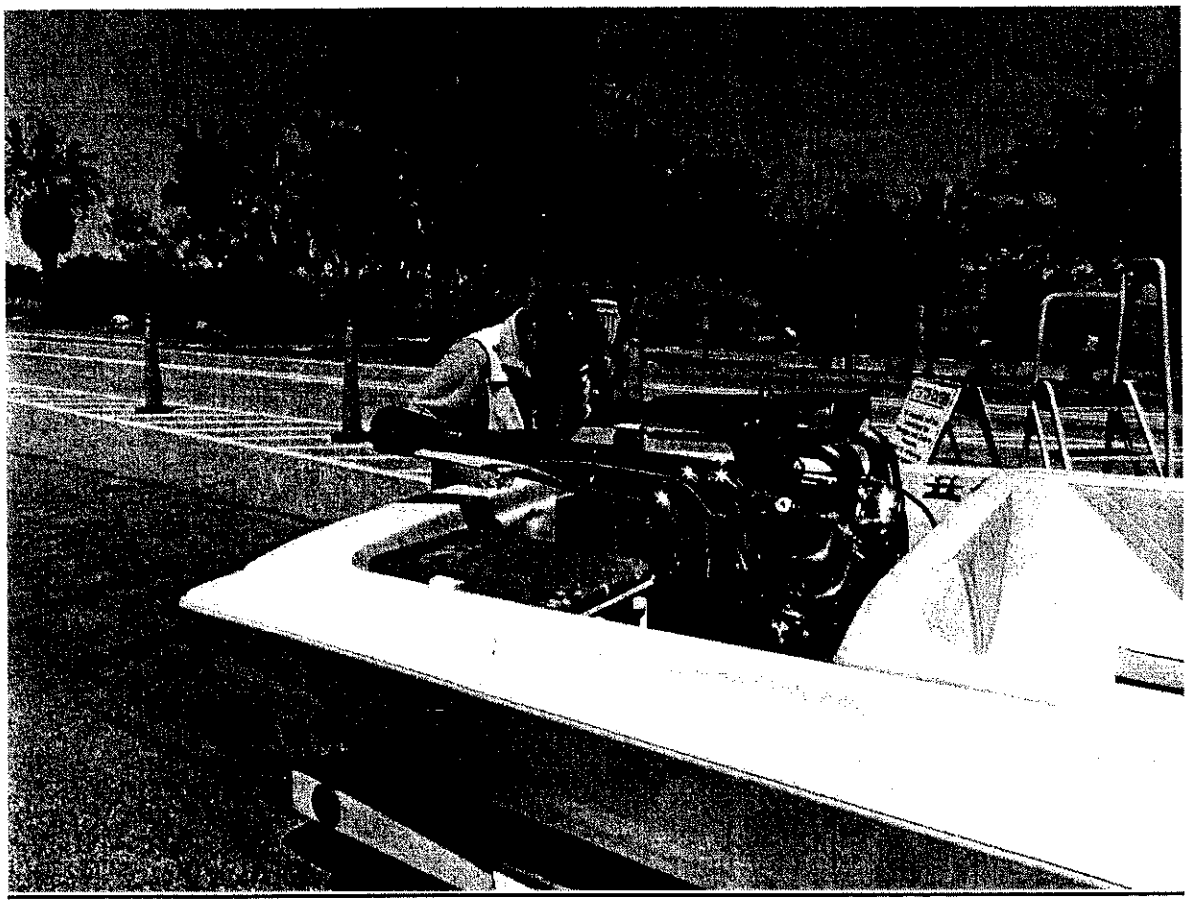
- The funding amount was insufficient to conduct a meaningful inspection program statewide.
- Most Quagga mussel infested water bodies are in Southern California in close proximity to Lake Perris and Silverwood Lake.
- The pilot allowed DPR to conduct a quality and efficient inspection program at two locations.

As part of this budget item, DPR agreed to prepare a report within a reasonable time following the completion of the pilot program. The report summarizes DPR's activities, findings and provides recommendations for future actions. These include, but may not be limited to the effectiveness of the strategies employed, appropriateness of staffing and resources, and an analysis of and the potential for alternative funding sources if the program is to be carried on into the future. The report is a public document available to the State of California's Natural Resources Agency and other interested agencies. This report meets the preceding requirement.

DPR has (and continues to) focus on preventative actions as it relates to the Quagga mussel threat. The primary threat of introduction is through vessels that visit its reservoirs and may inadvertently carry the species through previous boating activity at other infected water bodies.

DPR has been conducting a Quagga Mussel inspection program at Lake Perris and Silverwood Lake since April 2009. DPR's program has evolved very quickly into a model program for others to adopt. Not only are the number of inspections on a par with the largest program in the state (border checkpoints) but the DPR inspection

program has been widely accepted by the public. Additionally there have been no confirmed Quagga finds at either of the two reservoirs DPR's program is in place.



Background

DPR received $1.413 million in the 2008-2009 budget (budget item 3790-001-0516) for a two year pilot program for inspection and education related to the Quagga mussel threat. Funding came from Department of Boating and Waterways (DBAW) funds. This funding allowed DPR to conduct an active inspection program at two reservoirs (Lake Perris and Silverwood Lake) in Southern California, and continued education efforts at other DPR reservoirs. Lake Perris and Silverwood Lake are part of the State Water Project (SWP) which is operated by the California Department of Water Resources (DWR). DPR is responsible for recreational activities at these two lakes through an operating agreement between the two agencies. Similar recreational operating agreements exist allowing DPR operations to occur at other DWR and Bureau of Reclamation (BOR), a federal agency, owned reservoir facilities.

DPR has focused on preventative actions as it relates to the Quagga mussel threat. The primary threat of introduction is through vessels that visit its reservoirs and may inadvertently carry the species through previous boating activity at other infected water bodies.

Quagga monitoring programs at DPR's reservoirs are conducted by BOR and DWR depending on which agency has primary responsibility for the facility. DPR to a much lesser degree monitors for Quagga through an informal observational program involving visual inspections of docks, buoys, other structures and vessels.

Program Activities and Summary

Beginning April 1, 2009, DPR launched separate inspection programs at two of its reservoirs, Lake Perris and Silverwood Lake. This pilot program funded a total of 3 separate inspection stations that were staffed during each of the park's operational hours (generally 6 am to sunset).

Inspections were conducted by specially trained seasonal employees who asked a series of questions of each visitor and then conducted a physical inspection of each vessel that entered the park.

If the vessel failed an inspection (water or other wet conditions in or on the boat, a presence of Quagga, resistance to program requirements) the vessel was quarantined for 7 days and denied access to the reservoir. The owner or operator could have still entered the park as long as that boat was not launched at the reservoir. If they chose not to they were instructed to exit the park. Vessels that failed inspection were marked with a distinct tag and were allowed to reenter the park as long as the tag was intact, the boat was dry, and the correct amount of time had passed.

If the vessel passed inspection the visitor was allowed to proceed to the launch ramp and was contacted by another inspector. Paperwork was checked and the visitor was allowed to launch the vessel. If the visitor planned to revisit either of the two lakes and not go elsewhere the vessel was marked with a distinct tag that allowed the vessel to bypass the inspection station upon a return visit.

Program evaluation showed that it was very effective and well received by the public. As of the date of this report there had been no confirmed Quagga findings at either of these two reservoirs.

Preventative efforts at the other DPR reservoirs were focused on educational outreach through signage, handouts, and personal contact. DPR installed signage primarily at launch ramps and park entrance stations to help provide information and education to visitors. Although focused on the boating public, the information was readily available to

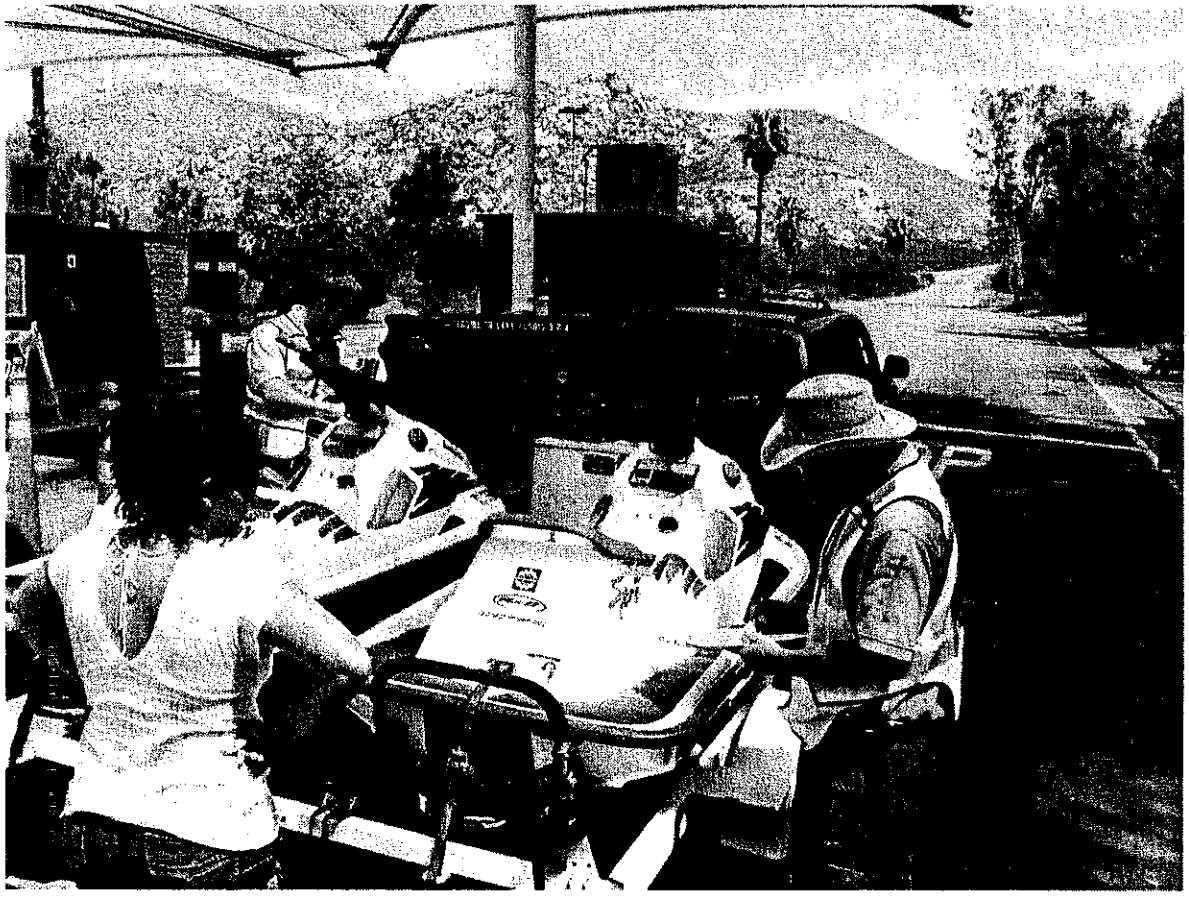
all park visitors. Rangers and other park personnel informed the public on Quagga related information through personal contact and occasional interpretive programs.

Lake Oroville is the largest DWR reservoir operated by DPR and is unique in many ways. Lake Oroville is the beginning of the State Water Project and serves as the "headwater" source for the entire system. If infected with Quagga the entire SWP could potentially be at risk through the water transfer delivery system regardless of vessel inspections. Because of the lake's size, houseboats are a common sight. Some houseboats are quite large and are transported from other areas throughout the country. These boats may have been subjected to infested waters primarily in other states and could potentially infect Lake Oroville. Staff at Oroville developed an inspection program specifically for houseboats that were brought to the lake by commercial transport. A fee was charged and a thorough inspection of each houseboat was conducted by trained personnel prior to launching at the lake. This particular program is self funded through the park's special event program and has not been funded through DBAW funds. Other inspection efforts by DPR personnel have been conducted on a limited basis at Clear Lake State Park.

Findings and Results

- *Inspection Data*

DPR conducted a total of 75,391 inspections at Lake Perris and Silverwood Lake from April 2009 thorough June 2010. The following table illustrates a month to month breakdown of inspection activity at each reservoir.



Lake Perris

Month	Inspections	Failures
April 2009	1734	230
May 2009	3410	380
June 2009	2572	284
July 2009	4298	556
August 2009	3739	540
September 2009	2715	238
October 2009	973	52
November 2009	426	18
December 2009	223	16
January 2010	299	14
February 2010	262	10
March 2010	753	28
April 2010	1397	94
May 2010	2092	279
June 2010	2526	298
Total	27419	3037

Silverwood Lake

Month	Inspections	Failures
April 2009	2669	155
May 2009	4699	77
June 2009	6004	172
July 2009	5797	153
August 2009	7131	190
September 2009	6285	81
October 2009	1617	23
November 2009	848	9
December 2009	316	3
January 2010	523	1
February 2010	451	0
March 2010	1476	20
April 2010	1494	24
May 2010	3223	96
June 2010	5439	96
Total	47972	1100

- *Program Expenditures*

Category	2008/2009	2009/2010	Total
Personal Services	$254,169	$391,944	$646,113
Operating Expense and Equipment	$567,195	$81,752	$648,947
Total	$821,364	$473,696	$1,295,060

Recommendations and Conclusions

- *Effectiveness of Strategies employed*

The pilot program conducted at Lake Perris and Silverwood Lake resulted in 75,391 vessel inspections over a 15 month period. There were exactly 4,137 vessels that were prevented from launching because of conditions that potentially could have introduced the Quagga Mussel into either of the reservoirs. As of September 30, 2010, there have been no confirmed reports of Quagga mussel infestation at either reservoir.

It should be noted that mussel infestation is not limited to vessels and there are other methods of introducing the invasive species into any of DPR's water bodies. However the most likely method of infestation is either through physical water transfer (introduction of water that has been previously infested) or through vessels that have been in infested water and then launch in non infested water. (In fact it is widely believed that Lake Mead was infested in this manner and that the lower Colorado River was then infested through water transfer from Lake Mead).

DPR feels that the pilot inspection program has been very effective at preventing a Quagga Mussel infestation at both Lake Perris and Silverwood Lake through vessel transfer. Although there are no reports of any adult Quagga Mussels on board any of the inspected vessels, the vessels denied launching privileges all had the potential of introduction of microscopic forms of the invasive pest.

DPR strongly believes that the inspection program at both Perris and Silverwood has been a success at preventing the infestation of both lakes with the Quagga Mussel.

- *Appropriateness of Staffing and Resources*

The pilot program has been implemented primarily through the utilization of a seasonal workforce supervised and supported by permanent full time staff. The seasonal workforce has been specially trained and for the most part retained on a recurring basis for the life of the program. This has allowed a consistent and experienced approach to the inspection of vessels and the delivery of message to the public. It has also been a success during very difficult budget years for the department. Equipment and other support resources for the pilot have allowed the program to function efficiently without impacting other park operations.

- *Analysis of and the Potential for Alternative Funding Sources*

The State continues to struggle with budget issues that directly impact DPR and its delivery of services. DPR is not able to directly fund the existing inspection program including the public education component with existing budgetary support.

In addition to the existing program funding through DBAW there are other potential funding sources that might be available to support inspection activities in future years.

1. Water agencies

It can be argued that nearly every water body that DPR operates for a recreational basis is primarily intended for domestic or agricultural purposes. DPR through its Quagga Mussel prevention activities (primarily inspections) is taking a proactive and effective effort at protecting those water bodies and ultimately the water agencies and customers that utilize the water. The costs of dealing with an infestation of water delivery systems are significant and ongoing. It is conceivable that DPR's prevention program could be supported by funding from the water delivery community as a component of protecting those systems. At this time there has been little effort to fund DPR's program from this source. It is beyond DPR's responsibility or capability to effectively analyze a funding mechanism that would impact the water delivery community. A cooperative and collaborative effort with that community would be the preferred method of securing a stable funding source however.

2. Inspection fees

There are instances of agencies charging users an inspection fee to support ongoing inspection programs. DPR has resisted this approach for a variety of reasons. Boaters already pay a vehicle entry fee and a separate boat launch fee for every vessel launched. These fees have risen significantly during the last few years in response to the state's budget difficulties. Additionally there are problems implementing a one time inspection fee (i.e. boats only using a DPR facility) compared to a recurring inspection fee (i.e. boats using multiple locations that may or may not be infested). The negative reaction from the public is anticipated to greatly outweigh any benefit from implementing an inspection fee at DPR facilities.

- *Conclusion*

DPR has implemented an effective and efficient Quagga Mussel Prevention Program that has been successful at preventing an infestation at Lake Perris and Silverwood Lake. Continuation of this program is an important component in protecting water quality for millions of Californians. It is also a cost effective step at protecting the State's water delivery infrastructure. Continued support of this program through the Department of Boating and Waterways dedicated funding source is critical to its ongoing success.

Recommended Uniform Minimum Protocols and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States

Prepared for the:

Western Regional Panel on Aquatic Nuisance Species

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PREFACE

While the primary goal of watercraft interception programs must be to prevent the transfer of quagga and zebra mussels (referred to here as Dreissenid mussels) on trailered watercraft/equipment in order to safeguard natural resources, water supply, recreation and other important resources, we believe one objective of any long-term mussel interception program should also be to keep public and private waters open to boating to the greatest extent possible. While it may only take one infested watercraft or piece of equipment to establish a Dreissenid mussel population, the vast majority of watercraft are not transporting mussels. By following common sense guidelines a watercraft interception program can be established that will readily identify high risk watercraft so that more restrictive strategies can be focused where they are the most critically needed.

We realize the inherent difficulty in implementing a regionally consistent watercraft interception program. Adding to the challenge is that numerous programs are already in place, while others are in the early planning or implementation stages. In some instances, changes to regulations at the local, state and possibly federal level may be necessary to implement a comprehensive multijurisdictional program. We therefore encourage continued discussion of ideas and cooperation amongst agencies on this issue and realize that this document is one piece for consideration in tackling a complex issue.

This is a "living" document and will undoubtedly evolve as new information becomes available. We expect that the same process used for reconciliation and adoption of these protocols and standards will be employed to periodically update this document as new information becomes available (especially in regards to watercraft decontamination efficacy and new technologies).

I. BACKGROUND

Following the discovery of quagga mussels in the western United States at Lake Mead in January 2007, and their subsequent detection in downstream Colorado River reservoirs and connected waterways of the Colorado River aqueduct systems in California and Arizona, many water and resource management agencies and organizations in the western U.S. initiated watercraft interception programs to prevent the further expansion of Dreissenid (quagga and zebra) mussels into local waterways. Most of the agencies and organizations employing these programs have relied on the 100th Meridian Initiative's Watercraft Inspection Training (WIT)

program administered by the Pacific States Marine Fisheries Commission (PSMFC) for their initial training and for the development of policies, protocols and standards (http://www.aquaticnuisance.org/wit). As a result, there are similarities between many of the watercraft interception programs now being implemented in the western U.S. that are rooted in that initial training. However, variations in watercraft inspection programs exist due to the individual priorities, policies, authorities, responsibilities, budget and physical limitations of each implementing entity.

The Western Regional Panel (WRP) of the national Aquatic Nuisance Species Task Force (ANSTF), the Western States Boating Administrators Association (WSBAA), their member agencies and most organizations currently involved in watercraft interception programs in the West have recognized the need for better coordination and more consistency in the application of protocols and standards currently used to prevent the overland transport of Dreissenid mussels on trailered watercraft and equipment. To address this need, the WRP recently initiated a project to identify and assess the watercraft interception programs of all agencies or organizations that are either currently engaged in or planning to implement watercraft interception programs in 2009. A total of 72 programs employing some form of watercraft interception on about 300 waterbodies in 20 western states were identified through this effort (see **Attachment 1** for a complete list of those agencies and organizations).

Each of these agencies or organizations received an on-line survey in January 2009 designed to identify the key elements of each program and gauge support for developing uniform minimum protocols and standards. Of the 69 entities completing the survey (96% return), nearly 90% favored the development and implementation of more consistent protocols and standards for watercraft interception programs that could be applied across jurisdictional boundaries.

DEFINITION:

Watercraft Interception Program – Any program which seeks to prevent the spread of Dreissenid mussels and other aquatic nuisance species (ANS) on trailered watercraft or equipment by requiring that they be cleaned, and to the extent practical, drained and dried prior to launching.

The adoption of region-wide uniform minimum protocols and standards for watercraft interception programs is considered essential by nearly all state, federal, tribal and local agencies and organizations involved in this effort. In May 2009,

the Western Regional Panel submitted a draft "Quagga/Zebra Mussel Action Plan" to the national Aquatic Nuisance Species Task Force. The draft plan's objective is to underscore the highest priority actions and resources needed to minimize impacts of these invasive shellfish on native species, water delivery infrastructure, and other vulnerable resources in the West. One of the draft plan's highest priority action items is the development of consistent equipment inspection and decontamination protocols.

DEFINITION:

Clean - Absent visible ANS or attached vegetation, dirt, debris or surface deposits including mussel shells or residue on the watercraft, trailer, outdrive or equipment that could mask the presence of attached mussels

Drained - To the extent practical, all water drained from any live-well, bait-well, storage compartment, bilge area, engine compartment, floor, ballast tank, water storage and delivery system, cooler or other water storage area of the watercraft, trailer, engine or equipment

Dry - No visible sign of standing water on or in the watercraft, trailer, engine or equipment

Consistent protocols and standards for watercraft interception programs across the western United States would benefit water and resource managers and the boating public in a number of important ways including:

1. Increased effectiveness by ensuring that all programs utilize the best practical science and technology available.

2. Establishing a high level of confidence in the effectiveness of their own programs and trust in the programs employed by others.

3. Reducing the amount of staff time and funding required of all programs by avoiding unnecessary duplication of effort while increasing effectiveness and public acceptance.

4. Making it easier for the boating public to understand, anticipate and comply with watercraft interception and prevention programs.

Not every federal, state and local agency or organization currently has the authority or resources to implement all of the minimum protocols and standards identified here. In those cases where that capacity is lacking, we urge those groups to seek the regulatory authority and resources necessary to stop, inspect, decontaminate, quarantine or exclude high risk watercraft in order to insure protection of the natural resource, economic, public health and cultural assets that are threatened by this invasion.

In the past two years, many states including Washington, Idaho, Montana, Utah, Colorado and California have approved new legislation granting broader authority to intercept watercraft and equipment in transit. In addition, federal agencies like the National Park Service and organizations like local water and park districts have passed regulations establishing that authority within their respective jurisdictions.

While the protocols and standards recommended in this document are directed at preventing the inadvertent transfer of quagga/zebra mussels from areas where they are currently present to unaffected waters on trailered watercraft and equipment, their application will help prevent the spread of other Aquatic Nuisance Species (ANS) as well. The screening, inspection, decontamination and quarantine/drying actions described here to reduce the risk of mussel transfer are also effective for reducing the risk of overland transport of invasive aquatic vegetation, fish, disease pathogens, plankton species and other ANS.

IMPORTANT REMINDER, EDUCATION:

While watercraft interception programs are an important public outreach and education vehicle, all agencies and organizations must also recognize the need to use other outreach strategies to make boaters more aware of the importance of preventing the spread of aquatic nuisance species such as zebra and quagga mussels and what role they can play in those prevention efforts. A watercraft interception program by itself is not sufficient to gain public involvement, support and cooperation. Public outreach and education should be the cornerstone of all state, federal and local mussel prevention programs.

II. APPROACH

The protocols and standards recommended here are the products of:
(Please refer to the References section on page 28):

1. An extensive research review

2. Results from a WRP survey of watercraft/equipment interception programs in the 20 western states completed in February 2009

3. A review of individual agency/organization policies, procedures and standards; and

4. The experience gained from more than 40 Watercraft Inspection and Decontamination trainings delivered to over 2,000 individuals representing 95 different agencies/organizations in 12 western states over the past two years, and the extensive contact network established through that (WIT) training program.

Protocols and standards have been identified for seven possible elements of watercraft interception programs:

1. Self-Inspection (Voluntary/Mandatory): A self-inspection program can be implemented alone or as an "off-hours" adjunct to a more direct and comprehensive interception program. This type of program involves requiring (mandatory) or requesting (voluntary) the cooperation of individual watercraft operators to complete an inspection of their vessel prior to launching by following a set of instructions and completing a checklist provided at an entry station or kiosk.

2. Screening Interview: The screening interview involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk based on the recent history of use for the subject watercraft or piece of equipment. This should be an element of every intervention program that includes individual contact.

3. Watercraft/Equipment Inspection: A close visual and tactile inspection of all or selected watercraft focused on all exterior and interior surfaces, areas of standing/trapped water, trailer and equipment to determine the presence or likelihood of mussel contamination.

4. Decontamination: The process of killing and removing all visible mussels and, to the extent practical, killing all veligers and remaining mussels from every area of watercraft, trailer and equipment.

5. Quarantine/Drying Time: The amount of time out of the water required to assure that all mussels and veligers are killed through desiccation. This time requirement varies widely depending on temperature and humidity conditions.

NOTE ON BALLAST TANKS:

Areas that can maintain water or moisture for extended periods like ballast tanks and other hard to access and drain water storage areas do not dry sufficiently using the prescribed drying time standards referenced in this report. When ballast tanks or other inaccessible water storage areas are present, specific hot water treatment of these areas must be required for all high risk watercraft (See pages 18-20 for specific procedures to be followed).

6. Exclusion: Not allowing watercraft or equipment to be launched. In extreme cases, exclusion can be applied to all watercraft, but in most cases, it is applied to only watercraft and equipment that are considered to be high risk, when other options are not available.

7. Certification: A process whereby watercraft/equipment are determined to present minimal risk based on inspection, decontamination or quarantine/drying time and receive some visible form of certification of that fact (e.g., trailer tag, sticker, band, etc.). It is important to note that it is not possible to certify watercraft are "free of mussels," only that the most current and effective protocols and standards have been applied to kill and remove all visible mussels and veligers.

Not all agencies and organizations currently implementing watercraft interception programs employ all of these elements. In fact, less than half of those surveyed employ four or more of these elements in their programs.

DEFINITION:

High Risk Watercraft/Equipment – Any vessel or piece of equipment that operates on or in the water that has been used in any waterbody known or suspected of having zebra or quagga mussels in the past 30 days or any watercraft or equipment that is not clean, and to the extent practical, drained and dry.

NOTE: Watercraft/equipment that have been moored or been in the water for several days or longer pose the highest level of risk for attached mussels, while all watercraft with on-board raw water systems present some elevated level of risk for veliger contamination regardless of the length of exposure. Generally speaking, the longer the period of exposure, the higher the risk.

III. Recommended Program Levels

Many agencies and organizations do not have the capacity to implement state-of-the-art programs that include all possible watercraft interception elements. Funding limitations, lack of access control or authority, and/or the level of political understanding and will, all play a role in determining whether a water or resource management agency decides to become proactive enough to implement a watercraft interception program and how extensive that program will be. However, in those situations where the risk is high, the potential savings from preventing a mussel introduction far outweighs the cost of implementing even the most comprehensive interception program.

Because of funding/staffing or authority limitations, a number of western agencies and organizations employ only random, periodic or peak-time interception programs. These programs have obvious limitations so, it is vitally important that agencies and organizations implementing this type of program also complete risk assessments on all major waterbodies and use that information to direct those limited efforts to waters with the highest risk of contamination.

It is also important that, to the extent practical, these programs follow uniform minimum protocols and standards for all elements of their interception programs and consider adopting more inclusive, but cost-effective, programs like volunteer or mandatory self-inspection while seeking more public, political and financial support for expanded programs as the threat continues to increase with each new mussel discovery.

DETERMINING INDIVIDUAL WATERBODY RISK LEVEL:

High Risk Waterbody – The determination of a "high risk waterbody" is the prerogative of the responsible management entity. Some of the factors used to determine risk potential include:

Whether water quality parameters (e.g., calcium) will support the survival, growth and reproduction of dreissenid mussels (these may vary within a given waterbody)

The amount and type of watercraft activity

Proximity to dreissenid positive or suspect waters

When the water in question is a headwater, water or power supply system or supports listed species (These waters warrant special consideration is warranted because the impacts of mussel contamination can have consequences far beyond local impacts).

It is the responsibility of water and resource managers to determine the level of acceptable risk and which type of watercraft interception program most closely reflects the mission and values of their agency or organization. However, consideration for the investments made by neighboring water and resource managers should not be overlooked when seeking support for interception programs. A common concern raised by survey recipients and WIT training program attendees is that up-stream or neighboring managers aren't doing enough to protect those systems, putting their investments and resources at risk.

We recommend the following three program levels for watercraft/equipment interception programs depending on the risk level and individual agency/organization capacity:

Level 1 (Self-Inspection): Relatively low cost program for low risk waters or on higher risk waters where organization or physical capacity prevents a more aggressive approach.

As an example, we recommend either a voluntary or mandatory self-inspection program similar to the one developed by the Utah Division of Wildlife Resources and in use at over 100 secondary risk waters in that state. Mandatory programs work best if the authority to enforce provisions of the program (*e.g.*, authority to require that all watercraft operators complete and post self-certification form) are

in place. In the absence of that authority, a voluntary program should be implemented.

This type of program involves the dissemination of an inspection form which can be made available at either an entry station, kiosk or message board with boldly printed instructions for the watercraft/equipment operator to answer all the questions and inspect all designated areas and equipment. The form is then placed in or on the transport vehicle where it can be easily seen. See **Attachment 2** for the form used by the Utah Division of Wildlife. If the program is mandatory, spot checks by enforcement personnel can reinforce compliance.

Self-inspection programs can be implemented for under $1,000/year in most areas and for under $25,000/year for an entire state. Including staff time for verifying and/or enforcing compliance can add to both effectiveness and cost.

Level 2 (Screening out high risk watercraft and equipment): Moderate to high risk waters where budget or other issues prevent a more comprehensive (Level 3) program.

We recommend a program that includes a screening interview to identify high risk watercraft and/or equipment, an inspection to verify interview information and exclusion of any watercraft/equipment that remain high risk following screening and inspection.

This type of program can often be incorporated into an existing entry station operation that is set-up to collect access fees, confirm reservations or provide use information and regulations. Current entry station staff can be easily trained to conduct verifying inspections and the number of watercraft excluded would normally be expected to be low on waters where this type of program would be implemented. Because a rigorous inspection is not required and no decontamination or quarantine facilities are required, this is a relatively low cost option for some agencies/organizations.

Programs like this typically cost between $5,000 and $50,000 a year to operate per water body and are a relatively low cost option.

NOTE ON LEVEL 1 AND LEVEL 2 PROGRAMS:

Level 1 and Level 2 programs are options for local jurisdictions when the capacity to implement more aggressive and effective programs is lacking. These programs, however, do not provide the level of security required for any type of cross-jurisdictional reciprocity because they do not offer any assurance that watercraft and/or equipment subjected to either type of program are, to the extent practical, free of mussels or other ANS.

Level 3 (Comprehensive): High risk waters and wherever possible.

We recommend this type of program for all high risk waters. A Level 3 program should include screening interviews at the point of entry; a comprehensive watercraft/equipment inspection performed by trained inspectors of all high risk watercraft/equipment; the decontamination and/or quarantine or exclusion of suspect watercraft, and may include vessel certification.

This type of program may require construction or modification of entry facilities, purchase of a hot water powerwash and wastewater containment system, hiring trained inspectors and decontamination operators and provision of a quarantine facility, along with a set of policies and rules that allow all of the above actions. Programs like this can cost between $50,000 and $250,000 per waterbody per season to operate depending on the size of water involved, type of equipment and facilities used, hours of operation and the number of access points.

IV. Uniform Minimum Protocols and Standards

The term **"Uniform Minimum Protocols and Standards"** implies that all agencies/organizations should strongly consider adoption of these as integral components of their Watercraft Interception Program. **However, because each entity is unique; having different missions, authority, resources, facilities and governing bodies, it is understood that additional or stricter standards may be implemented and that cross-jurisdictional reciprocity should be left to the discretion of the implementing agency/organization.**

DECONTAMINATION SAFETY ADVISORY:

Extreme caution should always be used when working in and around watercraft and equipment. This is particularly true when working with some of the high pressure equipment and the high water temperatures recommended here.

These protocols and standards reflect the best currently available science, technology and understanding. However, we recognize that watercraft interception and decontamination is a rapidly evolving field and that new information may change the way we view watercraft interception and decontamination in the future. There are at least two research projects currently in the planning stages that we expect will provide a better understanding of the effectiveness of current technology and the viability of alternative decontamination strategies.

We recommend the following Uniform Minimum Protocols and Standards for watercraft interception programs in the western United States:

IVa. Self-Inspection (Mandatory or Voluntary)

Self-inspection programs, whether voluntary or mandatory, offer a limited level of protection because compliance and effectiveness are not guaranteed. However, self-inspection programs are very effective boater education tools, provide some level of protection for waters where implemented, and are cost-effective. If a higher level of protection is not available because of insufficient funding, physical site limitations, lack of intervention authority or the sheer volume of waters needing coverage, the type of program currently implemented by the Utah Division of Wildlife Resources on approximately 100 of their secondary risk waters should be considered as a **minimal** interception tool or "off-hours" adjunct to a more comprehensive program.

Protocols:

1. Provide a self-inspection form and clear directions on how to complete the inspection and form at the point of entry, kiosk or dedicated check-in area.

2. Require (where a law/rule is in place) or request (when rules are not established) that the form be completed, signed, and posted in clear view on the watercraft/equipment transport vehicle prior to launching.

Standards:

Before launching, boaters must confirm that the following conditions have been met by signing and displaying a completed self-inspection form.

1. Watercraft, equipment, trailer have not been in any water known or suspected of having quagga/zebra mussels in the past 30 days.

2. Watercraft, equipment, trailer are cleaned, and to the extent practical, drained and dried.

3. Watercraft, equipment, trailer have been visually inspected at the site prior to launching.

IVb. Screening Interviews

The screening interview [see **Attachment 3** for an example of a screening interview/boater use survey form from Crowley Lake Fish Camp – Los Angeles Department of Water & Power] involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk posed by that watercraft based on its recent history of use. This should be an element of every intervention program where personal contact with the watercraft/equipment operator is made.

In order to be most effective, the screening interview should not rely totally on the responses given, but the person conducting the interview should be attentive enough to make sure that the responses given match the physical evidence available and are credible.

Protocols:

1. Develop and use a standard screening interview form that, at a minimum, includes the following questions:

    - The home location of the owner/operator

- The specific location (waterbody) where the watercraft or equipment was last used
- The date of the last use
- If the watercraft/equipment has been cleaned, drained and dried

2. Verify the responses by checking the license plate or registration (boat ID) number and doing a quick visual inspection and clarify any inconsistencies between the responses given and the physical evidence before clearing the watercraft or equipment for launch.

3. The screening interview provides all agencies and organizations implementing interception programs the opportunity to explain the importance of prevention and to educate the boating public on ways they can take personal responsibility for "clean" boating.

Standards:

1. Watercraft that have been used in any Dreissenid mussel positive or suspect waterbody in the past 30 days should be subjected to a comprehensive inspection by a trained professional before being allowed to launch.

2. If there is reasonable suspicion of deception on the part of the owner/operator/transporter during the screening interview, the vessel shall be subjected to a comprehensive inspection before being permitted to launch.

IVc. Watercraft/Equipment Inspection

Inspecting watercraft and equipment for the presence or likelihood of Dreissenid mussels is perhaps the most important and difficult element of a successful interception program. Conducting an effective inspection requires some knowledge of Dreissenid mussel identification, life history and biology, a good understanding of the working parts of a watercraft and the cooperation of the boat/equipment operator. In addition, watercraft and equipment inspection needs to be systematic and thorough. A checklist should always be used when conducting a watercraft or equipment inspection in order to assure that all areas where mussels and veligers can be found are inspected.

A basic watercraft inspection and decontamination course, like the Level One course offered by the Pacific States Marine Fisheries Commission and certified by

the 100th Meridian Initiative (http://www.aquaticnuisance.org/wit) is highly recommended for anyone who will be directly involved in watercraft inspection. An advanced training (Level Two) should be taken by at least one agency/organization representative engaged in or planning to become engaged in watercraft interception. The 100th Meridian Initiative Level Two training comes with the tools and resources necessary to become an in-house Level One trainer.

The authority to stop, inspect, decontaminate and/or quarantine watercraft or equipment varies between jurisdictions. Make sure you understand the authority you have in your jurisdiction and exercise it according to the law with regard to search and seizure.

Protocols:

1. Use an inspection checklist and follow it. The inspection checklist should include (at a minimum) the following information (See **Attachment 4** for the inspection form used by the Colorado State Parks):

    - The home state or area code where the watercraft or equipment is registered
    - The vessel ID number
    - The name and date of the last water visited
    - A checklist of areas to be inspected, including all of the following:

        Exterior Surfaces: (at and below the waterline)
        Hull, transducer, speed indicator, through-hull fittings, trim tabs, water intakes, zincs, centerboard box and keel (sailboats), foot-wells (PWCs)

        Propulsion System:
        Lower unit, cavitation plate, cooling system intake, prop and prop shaft, bolt heads, gimbal area, engine housing, jet intake, paddles and oars

        Interior Area:
        Bait and live wells, storage areas, splash wells under floorboards, bilge areas, water lines, ballast tanks, drain plug

Equipment:

Anchor, anchor and mooring lines, PFD's, swim platform, wetsuits and dive gear, inflatables, down-riggers and planing boards, water skis, wake boards and ropes, ice chests, fishing gear, bait buckets, stringers

Trailer:

Rollers and bunks, light brackets, cross-members, license plate bracket, fenders

2. Inspect all high risk watercraft (See definition on page 8).

3. Have a systematic plan when conducting inspections to ensure complete coverage of every area of the watercraft.

4. Use the opportunity to educate the boat owner/operator on the importance of pre-launch self-inspection, proper cleaning and drying and the reasons why all watercraft and equipment operators need to clean, drain and dry watercraft and equipment when moving between waters.

Standards:

1. If attached mussels or standing/trapped water are found on a high risk vessel, it should not be allowed to launch without first being decontaminated or subjected to the prescribed quarantined/drying time standard or both.

2. If water is found on exposed areas only (rain or wash-water), on an otherwise low risk and clean watercraft, the watercraft should be thoroughly wiped dry first, but allowed to launch.

3. If no mussels or water are found following a thorough inspection of the watercraft that is considered high risk because it has been in known mussel waters within the last 30 days, but has been out of the water long enough to be considered safe by applying drying time standards, it should be allowed to launch, **except for watercraft that have ballast tanks or other difficult to access and completely drain water storage areas. Normal drying time standards do not apply when areas that cannot be completely drained are present. These areas need to be treated to kill any mussels or veligers that are present.**

4. Any watercraft or piece of equipment with attached vegetation (including algae growth) should not be allowed to launch without their complete removal and re-inspection, if necessary.

NOTE ON LIVE BAIT FISH:

If the use of live bait fish is permitted in your jurisdiction and they are found during inspection, remove the bait, place in a bucket of clean water, drain and flush the live bait container with hot water and then return the bait to the clean container (while this system does not assure that mussel veligers or even small settlers are not present on the fish themselves, it is the best "minimum" standard for dealing with this situation currently available).

IVd. Watercraft/Equipment Decontamination

If, following inspection, a watercraft or piece of equipment transported from one waterbody to another is confirmed or believed to have mussels on board, three options are available: 1) decontamination, 2) quarantine/drying, 3) exclusion. Decontamination is the only option that kills and removes mussels. Since we cannot be sure that all areas of the watercraft and/or equipment have been adequately treated, we recommend that a period of drying (using the 100th Meridian Initiative quarantine time calculator or the table on page 23) be used in conjunction with decontamination for all watercraft confirmed or suspected of having mussels on board.

There are a number of ways to decontaminate watercraft, but with the current technology available, we recommend the exclusive use of hot water (140 degrees Fahrenheit or greater at the point of contact) and pressure washing equipment with various attachments to kill and remove all visible mussels (live and dead) and veligers from all areas of the watercraft, engine, trailer, and equipment. [Note: Even though concerns have been raised about the efficacy and safety of hot water pressure washing (Morse 2009), the reality is that many programs throughout the West have already invested in these systems and it will continue to be a primary management tool for at least the near term. Other methods to decontaminate watercraft are currently not available nor produced on a large enough scale to be economically feasible. We do not believe that relying solely on aerial exposure and desiccation as the primary means of decontamination is feasible given the thousands of watercraft that are moving around the west on a daily basis.

Desiccation also will not remove dead mussels (see below). However, we do encourage and support the combination of drying time and hot water decontamination as the most effective means to assure that all mussels are killed, and to the extent practical, all visible mussels are removed.]

The objective of decontamination is to KILL and REMOVE, to the extent practical, all visible mussels. Killing prevents establishment of new populations as a result of watercraft/equipment transfer, but, removing them is also important because a false positive finding may result from the presence of mussel shells (or DNA in samples collected for genetic (polymerase chain reaction {PCR}) analysis, even though they are dead. This can result in unnecessary concern and expensive action if unexplained shells drop or are scrapped-off the hull and are subsequently discovered at a boat ramp or the lake bottom, or if a watercraft is intercepted in transit. Furthermore, there are no standard protocols in place to easily confirm the viability of attached mussels within the context of a watercraft inspection or decontamination. Therefore, mussels on watercraft or equipment that appear to be dead do not necessarily indicate that those mussels, or others not clearly visible settled elsewhere, are in fact dead.

Protocols:

1. Before commencing a decontamination procedure, get the permission of the vessel owner after explaining the options and process in detail.

2. Find a location for the decontamination that is away from the water where the run-off and solids from the cleaning process can be contained and will not re-enter any waterbody.

3. If possible, wastewater and solids should be totally contained (low-cost containment systems now exist for this purpose) and directed to an appropriate waste treatment or disposal facility (new guidelines are currently being developed by the EPA for this application).

Standards:

1. Use 140 degree Fahrenheit or hotter water (at the point of contact) to kill mussels and veligers. Water loses approximately 15-20 degrees F per foot of distance when sprayed from a power nozzle, so initial temperature should be increased to account for this heat loss to the point of contact.

2. When using a hot water flushing attachment and/or pressure washer to kill and remove attached mussels from the surface of watercraft/equipment, allow **at least** 10 seconds to elapse from the leading edge of the spray to the tailing edge when moving the wand across the surface to maintain sufficient "lethal" contact time. If larger mussels are present, it may require more time to remove them from the surface.

NOTE ON "HIDDEN" MUSSELS:

It is not normally possible to remove all attached mussels from every area of the watercraft/equipment. The standard is to remove all "visible" mussels. A day or two following a very thorough decontamination, it is not unusual for mussels to appear as byssal threads begin to decompose and mussels slide out of hidden areas to become visible. In addition there are some areas of almost any watercraft or piece of equipment that cannot be easily accessed to remove dead mussels. If properly treated, these mussels are dead and in the process of decay. Brushes may be used in conjunction with flushing in some of these areas when doing the initial decontamination to reduce (not eliminate) this from occurring.

3. Use a power wash unit capable of spraying at least 4 gallons/minute with a nozzle pressure of 3,000 psi or greater (not to exceed 3,500 psi) to remove attached visible mussels from all exposed surfaces of the watercraft, piece of equipment, trailer and engine.

4. Use a flushing attachment to rinse all hard to reach areas and those areas where pressure may damage the watercraft or equipment (such as the rubber-boot in the gimbal area). A brush may also be used in conjunction with flushing to remove more mussels from hard to access areas.

5. When flushing hard to reach and sensitive areas, maintain a contact time of 60 seconds to assure that mussels receiving only indirect contact are killed since it may not be possible to remove them from these areas.

6. First drain and then use a flushing attachment and 140 degree water to flush the live well, bait well, storage compartments, bilge areas, ballast tanks, bladders, gear and equipment to kill any mussels and veligers that might be present.

7. Use appropriate attachment connected to the powerwash unit or other hot water source, start the engine and run for 1-2 minutes to kill mussels in the engine cooling system.

WARNING ON ENGINE COOLING SYSTEMS:

Marine engine cooling system pumps and engines are not designed to operate at less than seven gallons per minute (gpm) over an extended period, and most current power wash units are not designed to deliver more than five gpm. Therefore, when using a power wash unit for this purpose, it is important to limit run-time to **one to two minutes** to avoid any possible engine/pump damage. No such limitation exists if an outboard is "tank run" in hot water without the use of a power wash unit.

There must be enough volume to properly supply an engine's cooling system in order to keep them from overheating. Five gpm will suffice as long as the engine is idling. In all cases, the operator must watch the temperature gauge during the flushing process. The person who is doing the decontamination should monitor the water being discharged from the engine with a handheld temperature gauge to make sure that the discharge temperature is at least 140°F. Volume is critical as is constant temperature monitoring.

IVe. Quarantine or Drying Time

If watercraft and/or equipment suspected of carrying zebra or quagga mussels cannot be decontaminated for any reason, then they must be held out of water for a period of time to dry-out and kill all mussels and veligers on-board through desiccation. The amount of time required to achieve complete desiccation varies depending on temperature and relative humidity and can range from 3-30 days (McMahon, Personal Communication).

Quarantine/drying is probably the most effective way to assure that live mussels are not transported between waterbodies on trailered watercraft or equipment. The problem with quarantine/drying is that it does not remove attached mussels. If mussels remain on the vessel, they will eventually drop off. If that occurs at a boat ramp or beach, the presence of mussel shells can raise concern of a new infestation, triggering alarm and resulting in expensive and unnecessary action. For that reason, we recommend that all visible mussels be removed from quarantined/dried watercraft before they are allowed to launch.

NOTE ON TREATING BALLAST TANKS:

Remember, drying time does not apply in the same way to watercraft with ballast tanks or other water storage areas that are not easily accessed and cannot be completely drained. If these areas maintain water, then the actual time required to achieve 100% mortality either through desiccation or anoxia will most likely exceed the drying time standards recommended here. In those cases, after draining, remaining water should be treated with hot water. Some ballast system manufactures have indicated that their pumps and/or other system components are designed for temperatures of no more than 130 degrees. For that reason, we recommend treating these areas last after reducing the water temperature and flooding the area with 120-130 degree hot water. Since these areas typically contain only small volumes of un-drained water, the dilution rate and resulting temperature drop should not prevent lethal treatment temperatures from reaching any living mussels or veligers. To maintain lethal temperatures for a long enough time to achieve 100% mortality it is important to pump water through the area for at least one to two minutes and monitor the exiting water temperature with a handheld temperature gauge.

The 100th Meridian Imitative has developed a quarantine time calculator based on research preformed by Dr. Robert McMahon and others at the University of Texas, Arlington. That calculator is available on the organization's website, http://www.100thmeridian.org. When practical, we recommend using this standard for determining the length of quarantine or drying time (except when ballast tanks or other inaccessible raw water storage systems are involved) needed to assure that a watercraft or piece of equipment is safe to launch. When this level of precision is not practical for field operation, a second standard is also recommended below.

Protocols:

1. Requiring quarantine, drying time or a waiting period should be applied to watercraft and equipment that meet the definition of high risk; either in lieu of decontamination or in addition to decontamination as an "insurance policy."

2. Implementation of this option can take several forms.

    - Physically quarantining a watercraft or piece of equipment requires providing a safe and secure holding area where they can be "parked" for the amount of time required to kill all mussels on-board. A few agencies/organizations have used this option to take or over-see possession of suspect watercraft (with or without the owner's permission, depending on individual jurisdiction authority) until they remain out of the water long enough to be considered safe. Establishing and maintaining a dedicated quarantine facility can be expensive and comes with some potential liability issues.

    - When a quarantine facility is not available, then quarantine/drying time can be achieved by banding (secured connection between watercraft and trailer) the watercraft or equipment. The operator is advised not to launch into any freshwater area until the date indicated on the "band" or an accompanying paper certificate ((this form of quarantine does not require a holding facility).

    - The final option is simply to require that all high risk watercraft serve a pre-determined drying/waiting period prior to launch (duration determined by risk level and current temperature and humidity conditions).

3. All visible mussels should be removed from watercraft or equipment following quarantine or drying period before being allowed to launch.

Standards:

1. Where practical, the 100th Meridian Initiative quarantine time "calculator" should be used to determine the length of quarantine/drying time required (provides the greatest precision but limited availability and predictability for boaters).

2. When the use of the "calculator" is not practical, the standards below should be applied to determine the length of the quarantine/drying time required (Note: information provided in the following table was developed in cooperation with Dr. Robert Mcmahon, University of Texas, Arlington).

3. Watercraft with ballast or other internal water storage tanks that cannot be completely drained should be treated differently (See page 21).

Maximum daily temperature Degrees Fahrenheit	**Minimum days out of water**
< 30	3
30- 40	28
40-60	21
60-80	14
80-100	7
>100	3

NOTE: Add 7 days for temperatures ranging from 30-100 degrees if relative humidity exceeds 50%

IVf. Watercraft/Equipment Exclusion

High risk watercraft which are not decontaminated and/or quarantined should be excluded and not allowed to launch; whether the result of vessel owner refusal, or lack of available equipment, trained applicators or facilities. Exclusion should not be used as a long-term substitute for development of a more user-friendly interception program that recognizes the value of recreational boating to the economy, and the legitimate interests of the boating public.

In the two years since Dreissenid mussels were first found in the western U.S., many agencies and organizations responsible for water and recreation management have resorted to the use of exclusion to protect those resources from the mussel threat. The case for doing so is certainly understandable given the lag time needed to develop public policy, establish regulations, budget, train staff and purchase equipment needed for more proactive and considerate approaches.

Protocols:

1. High risk watercraft and equipment (see earlier definition, page 8) that have not been or can not be decontaminated or meet the quarantined/drying time standard should be excluded from launching.

2. The information obtained from the screening interview, used to determine risk level, should be shared with the watercraft owner/operator and made available on a real-time basis at all access points to prevent excluded watercraft/equipment from attempting to launch from any other access.

NOTE ON WATERCRAFT TRACKING:

A watercraft tracking software program (QID) has been developed by Quagga Inspection Services (see their website, www.info@quaggainspections.com for more information). This system is available for subscription and allows watercraft to be tracked across time and space using boater registration ID numbers and hand-held computer/cell phone technology. It can be used to prevent watercraft that have been excluded for cause from being launched at another access point within the system or for a number of other related applications. *Note: Providing information in this document on the QID does not constitute an endorsement as we have no firsthand experience with this system.*

Standards:

1. Watercraft or equipment that are coming from known zebra/quagga mussel areas in the last 30 days that have not been decontaminated and/or been out of the water for the required time (based on temperature and humidity conditions by either the quarantine time calculator or alternative method recommended here) should be decontaminated if approved facilities are available; placed in self or on-site quarantine for the required time frame; or excluded.

2. Watercraft that are not clean (having attached vegetation, debris or surface deposits that can mask the presence of small mussels), drained (no visible water in any live well, bait well, bilge area, engine compartment, floor or cooler) and dry (no standing water in boat, equipment, trailer, engine) should be decontaminated and/or quarantined or excluded.

IVg. Watercraft Certification/Banding

A number of boating and water management agencies and organizations currently offer some form of certification for watercraft or equipment that have passed inspection, been decontaminated or have remained out of the water long enough to satisfy quarantine/drying time standards. Certification of this type helps the

operator avoid repeated time delays upon reentry and makes it easier for the management agency/organization by reducing work load, processing time and by allowing them to concentrate limited resources on higher risk watercraft. Some groups currently offer a sticker or paper certificate, however, since there is no way to determine where that watercraft or equipment has been between interceptions, this form of certification offers little benefit. Some agencies/organizations (*e.g.*, the States of Idaho, Colorado and several water management agencies in California) have addressed this short-coming by applying "bands" that connect the watercraft/equipment to the trailer so that it cannot be used between interceptions without detection. In some cases, a written certificate is issued with banding.

If agencies and organizations choose to offer certification, we recommend that the watercraft/equipment be banded in such a manner that it can not be launched between interceptions without detection. If banding is coordinated between jurisdictions, further action can be expedited (at the discretion of the implementing agency/organization) at the next launch site anywhere in the western US so long as the tag remains intact. Such a system will reduce the amount of staff and equipment time required at interception facilities region-wide; increasing resource protection, saving money, reducing waiting time and crowding and lowering the frustration level of staff and the boating public.

Protocols:

In order to implement a region-wide program that may be acceptable to most agencies and organizations in the western U.S., three conditions should be met:

1. The agency/organization placing the tag/band must implement all Uniform Minimum Protocols and Standards to insure that the best practical science and technology has been employed in certifying the watercraft or equipment.

2. All agencies and organizations participating in this certification program should use a banding system that attaches the watercraft to the trailer that can not be tampered with or removed without detection. The certification is no longer valid if the band has been tampered with, severed or removed.

3. While a variety of different "band" styles and materials may continue to be used, all tags should have the following features: This information can either be incorporated into the band (which may be difficult) or be provided on an accompanying paper receipt or certificate.

- The name and contact telephone number of the agency/organization applying the tag.

- Some way to indicate the basis for certification as one of the following three categories; inspection, decontamination or quarantine (several options are available including color coding, pre-printed number or letter coding or coding applied at the time of issue).

- The banding date should be indicated on the tag (leaving a blank space for writing in the date of issue with indelible ink on the band or providing a dated "paper" certificate in addition to the banding appear to be the most practical options for this).

Standards:

1. Only watercraft or equipment that have passed inspection or have been decontaminated or quarantined in accordance with all of the Uniform Minimum Protocols and Standards as adopted, should receive certification banding.

2. Certification banding should only be applied by a trained inspector.

3. Watercraft and equipment that have been certified and banded by an agency or organization utilizing these Uniform Minimum Protocols and Standards may receive expedited processing at the discretion of the receiving agency/organization.

V. ADOPTION OPTIONS

After a thorough review and reconciliation process, we recommend that the WRP and other entities (potentially the Western State Boating Administrators Association (WSBAA), the Western Association of Fish and Wildlife Agencies {WAFWA}) and others, adopt and broadly promulgate these protocols and standards for watercraft interception programs in the Western United States.

Following that, a decision needs to be made whether or not to actively or passively pursue adoption of watercraft interception protocols and standards by individual agencies and organizations currently implementing or expected to initiate watercraft interception programs in the near future. We see two reasonable approaches.

If the principles choose the active option, one process may be to appoint an oversight committee of members (from the WRP, and other interested organizations {e.g., WSBAA, WAFWA}) to use contacts developed through the Watercraft Inspection and Decontamination Training Program and the WRP Watercraft Interception Program Assessment to facilitate a process that engages these groups with the goal of refining and agreeing to a regional approach. We believe this would involve regional meetings with groups, negotiation, reconciliation between groups and development of a formal process (potentially through a Memorandum of Agreement between states/jurisdictions) for adoption prior to the 2010 boating season.

A second option could be to formally adopt and promulgate the protocols and standards as a "best practices manual" and encourage their use by all agencies/organizations without the commitment of resources to more actively engage these groups in a dialogue; relying instead on their voluntary adoption and interagency agreements. For example, the State of Idaho has agreed to accept watercraft from Colorado that have been inspected and banded.

We realize the inherent difficulty in implementing a regionally consistent watercraft interception program. Adding to the challenge is that numerous programs are already in place, while others are in the early planning or implementation stages. In some instances, changes to regulations at the local, state and possible federal level may be necessary to implement a comprehensive multijurisdictional program. We therefore encourage continued discussion of ideas and cooperation amongst agencies on this issue and realize that this document is one piece for consideration in tackling a complex issue.

VI. References

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Personal Communications:

1. Kerry Smith and Jim Foust. Hydro Engineering. Salt Lake City, Utah.

2. Dr. David Britton. USFWS, Arlington, Texas.

3. Dr. Robert McMahon. University of Texas, Arlington.

4. Wen Baldwin. Lake Mead Boat Owners Association, Boulder City, Nevada.

5. Larry Dalton. Utah Division of Wildlife Resources, Salt Lake City, Utah.

6. Sergeant Eric Anderson and Allen Pleus. Washington Department of Fish and Wildlife, Olympia, Washington.

7. Rob Billerbeck and Gene Seagle, Colorado State Parks, Denver, Colorado.

8. Dominique Norton and Breck McAlexander, California Department of Fish and Game, Sacramento, California.

9. Tom McMahon and Kevin Bergersen, Arizona Game and Fish Department, Phoenix, Arizona.

10. Marshall Pike and Sean Senti, Quagga Inspection Services

11. Stephen Wickstrum, General Manager, Casitas Municipal Water District, Oak View, CA.

12. Scott Smith, United States Geological Service, Seattle, Washington.

13. Paul Heimowitz, United States Fish and Wildlife Service, Portland, Oregon.

14. Ken Kreif, Lake Kahola Zebra Mussel Committee, Kansas.

Watercraft interception program details and manuals were used as references in this document from the following:

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2. California Department of Fish and Game. 2008. A Guide to Cleaning Boats and Preventing Mussel Damage. Sacramento, California. 20 pp.

3. Casitas Municipal Water District. 2007. Lake Casitas Recreation Area Invasive Species Contamination Threat. Information, Training & Guidelines for Protection of Water Quality. Ventura, California. 33 pp.

4. Colorado Division of Wildlife. 2009. Aquatic Nuisance Species (ANS) Watercraft Inspection Handbook, Official State of Colorado Watercraft Inspection and Decontamination Procedures. Denver, Colorado. 48 pp.

5. Colorado State Parks. 2008. Colorado State Parks Aquatic Nuisance Species (ANS) Inspection and Education Handbook, Version 2. Denver, Colorado. 107 pp.

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17. Utah Division of Wildlife Resources. Date Unknown. Requirements to Prevent the Spread of Aquatic Invasive Species (Self Certification Form for Watercraft Owners). Salt Lake City, Utah.

18. Washington Department of Fish and Wildlife, Fish and Wildlife Enforcement. 2009. Invasive Species Vessel Inspection Form. Olympia, Washington.

19. Whiskeytown National Recreation Area. Date Unknown. Quagga and Zebra Mussel-Free Certification. Whiskeytown, California. 3 pp.

VII. Glossary of Terms

Certification - A process whereby watercraft/equipment are determined to present minimal risk based on inspection, decontamination or quarantine/drying time and receive some visible form of certification of that fact (e.g., trailer tag, band, etc.). It is important to note that is not possible to certify watercraft are "free of mussels", only that the most currently available and effective protocols and standards have been applied to kill and remove all visible mussels.

Clean - Absent visible ANS, attached vegetation, dirt, debris or surface deposits including mussel shells or residue on the watercraft, trailer, outdrive or equipment that could mask the presence of attached mussels.

Drained - To the extent practical, all water drained from any live-well, bait-well, storage compartment, bilge area, engine compartment, floor, ballast tank, water storage and delivery system, cooler or other water area of the watercraft, trailer, engine or equipment.

Dry - No visible sign of standing water on or in the watercraft, trailer, engine or equipment.

Decontamination - The process of killing and removing all visible mussels and, to the extent practical, killing all veligers and remaining mussels from every area of watercraft, trailer and equipment.

Exclusion - Not allowing watercraft or equipment to be launched. In extreme cases, exclusion can be applied to all watercraft, but in most cases, is applied to only watercraft and equipment that are considered to be high risk, when other options are not available.

High Risk Waterbody - The determination of "high risk waterbody" is the prerogative of the responsible management entity. Some of the factors used to determine risk potential include:

Whether water quality parameters will support the survival, growth and reproduction of dreissenid mussels

The amount and type of boater use

Proximity to dreissenid positive or suspect waters

Whether the water in question is a headwater, water or power supply system or supports listed species

High Risk Watercraft/Equipment - Any vessel or piece of equipment that has operated on or in any waterbody known or suspected of having zebra or quagga mussels in the past 30 days, or any watercraft or equipment that is not clean, and to the extent practical, drained and dry.

Screening Interview - The screening interview involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk based on the recent history of use. This should be an element of every intervention program that includes individual contact.

Quarantine/Drying Time - The amount of time out of the water required to assure that all mussels and veligers are killed through desiccation. This time requirement varies widely depending on temperature and humidly conditions.

Self-Inspection (Voluntary/Mandatory) - A self-inspection program can be implemented alone or as an "off-hours" adjunct to a more direct and comprehensive inspection program. This type of program involves requiring (mandatory) or requesting (voluntary) the cooperation of individual watercraft operators to complete an inspection of their vessel prior to launching by following a set of instructions and completing a checklist provided at an entry station or kiosk.

Watercraft/Equipment Inspection - Where all or selected watercraft are subjected to a thorough visual and tactile inspection of all exterior and interior surfaces, areas of standing/trapped water, trailer and equipment to determine the presence or likelihood of mussel contamination.

Watercraft Interception Program - Any program which seeks to prevent the spread of Dreissenid mussels and other Aquatic Nuisance Species (ANS) on trailered watercraft or equipment by requiring that they be cleaned, and to the extent practical, drained and dried prior to launching.

Attachment 1: List of Agencies and Organizations Implementing Watercraft Interception Programs in the Western United States.

Alaska:

Statewide

Jeff Heys, Alaska Region ANS Coordinator, Acting
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Tammy Davis, Invasive Species Program, Project Leader
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Arizona:

Statewide

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California:

Statewide

Susan Ellis, AIS Coordinator
California Department of Fish and Game
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Dominique Norton, Staff Services Analyst
California Department of Fish and Game
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Sacramento, CA 95814
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Border Inspection Stations

Gary Leslie, Border Station Program Supervisor
California Department of Food and Agriculture
1220 N Street, Room A-372
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Anderson Reservoir, Calero R, Coyote R, Stevens Creek R, Contra Loma R, Vail Lake, Diamond Valley L, Metcalf Pond, Lexington R

Sean Senti, Marketing/Training Coordinator
Quagga Inspection Services
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Pleasanton, CA 94566
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ssenti@calparksco.com

Robert Mitchell, Invasives Detection Manager
Urban Park Concessionaires/Quagga Inspection Services
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Los Gatos, CA 95032
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Clear Lake, Lake Pillsbury, Indian Valley Reservoir, Highland Springs R, Cache Creek R

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Whiskey Town Lake

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Whiskeytown NRA
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Ruth Lake

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Tahoe Basin/Lake Tahoe

Nicole Cartwright, Invasive Species Program Manager
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Loch Lomond

Scot Lang, Chief Ranger
Loch Lomond Recreation Area
City of Santa Cruz
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Pinto Lake

Robert Ketley, Biologist
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Parks and Community Services
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Watsonville, CA 95076
831-768-3137
rketley@ci.watsonville.ca.us

Lake Berryessa, Lake Folsom

Salvador Martinez, Civil Engineer
U.S Bureau of Reclamation
2800 Cottage Way, MO 157
Sacramento, CA 95825
916-978-5207
salvadormartinez@mp.usbr.gov

Briones Lake, Lake Chabot, Camanche Reservoir, Lafayette Reservoir, San Pablo Reservoir, Pardee Reservoir, San Leandro Reservoir

Timothy Cox, Project Manager
East Bay Municipal Water District and Contra Costa Water District
5883 E. Comanche Parkway
Valley Springs, CA 95252
209-763-5061
tcox@ebmud.com

Lake De Valle, Lake Chabot, Contra Loma Reservoir, Quarry lakes

Shelly Miller, Park Superintendent
De Valle State Recreation Area
East Bay Regional Park District
7000 De Valle Road
Livermore, CA 94550
925-373-9398
dvpark.ebparks.org

Anderson Reservoir, Calero Reservoir, Coyote Lake, Stevens Creek Reservoir, Visona Lake, Lexington Reservoir, Uvas Reservoir

Jim O'Connor, Deputy Director
Santa Clara County Parks and Recreation Department
298 Garden Hill Drive
Los Gatos, CA 95020
408-355-2226
jim.oconnor@prk.sccgov.org

San Diego Water Supply Lakes

Joe Weber, Lakes Program Manager
City of San Diego Water Department
12375 Moreno Avenue
Lakeside, CA 92040
619-668-2030
jweber@sandiego.gov

San Justo Reservoir

Jeff Cattaneo, General Manager
San Benito County Water District
30 Mansfield Road
Hollister, CA 95023
831-637-8218
jcattaneo@sbcwd.com

Lopez Lake, Santa Margarita Reservoir
Don Melin, Supervisory Ranger
San Luis Obispo County Parks
6800 Lopez Drive
Arroyo Grande, CA 93420
805-473-7182
dmelin@co.slo.ca.us

Lake Piru
Clayton Strahan, Supervisory Park Ranger
United Water Conservation District
4780 Piru Canyon Road
Piru, CA 93040
805-521-1645
claytons@unitedwater.org

Lake Henshaw
Angela Morrow, Water Resources Project Manager
Vista Irrigation District
1391 Engineer Street
Vista, CA 92081
760-597-3187
amorrow@vid-h2o.org

Lake Jennings, Lake Cuyamaca
Hugh Marx, Supervisory Ranger
Helix Water District
9535 Harriet Road
Lakeside, CA 92040
619-980-4844
helix.ranger@sbcglobal.net

Lake Cachuma
Liz Mason-Gaspar, Park Naturalist
Santa Barbra County Parks Department
Cachuma Lake, Hwy 154
Santa Barbara, CA 93105
805-688-4515
lmason@co.santa-barbara.ca.us

Lake Poway
Dave Richards, Recreation Supervisor
City of Poway
14644 Lake Poway Road
Poway, CA 92047
858-668-4774
drichards@ci.poway.ca.us

Lake Perris, Silverwood SRA
Norb Ruhmke, Superintendent
California State Parks, Lake Perris SRA
17801 Lake Perris Drive
Perris, CA 92571
951-443-2414
nruhmke@parks.ca.gov

Lake Dixon, Lake Wohlford
Tony Smock, Lakes/Open Space Superintendent
City of Escondido
1700 La Honda Drive
Escondido, CA 92027
760-839-4240
tsmock@ci.escondido.ca.us

Lake Casitas
Rob Weinerth, Ranger
Casitas Municipal Water District
Lake Casitas Recreation and Parks
11311 Santa Ana Road
Ventura, CA 93001
805-797-1702
rweinerth@casitaswater.com

Crowley Lake, Klondike Reservoir, Diaz L
Lori Gillem, Watershed Resource Specialist
Los Angeles Department of Water and Power
300 Mandich Street
Bishop, CA 93514
760-873-0407
lori.gillem@ladwp.com

Big Bear Lake
Mike Stephenson, Lake Manager
Big Bear Lake Municipal Water District
P.O. Box 2863
Big Bear Lake, CA 92315
909-866-5796
mstephenson@bbmwd.org

Lake Skinner
Kenneth Washington, Park Planner
Riverside County Parks Department
4600 Crestmore Road
Riverside, CA 92509
951-955-4310
kwashington@co.riverside.ca.us

Colorado:

Statewide

Elizabeth Brown, Invasive Species Coordinator
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216
303-291-7362 – Office
303-547-8690 - Cell
elizabeth.brown@state.co.us

Rob Billerbeck, Stewardship and Natural Areas Manager
Colorado State Parks
1313 Sherman Street, Suite 618
Denver, CO 80203
303-866-3437 ext. 4341
rob.billerbeck@state.co.us

Antero, Eleven Mile and William Fork reservoirs
Neil Sperando, Recreation Manager
Denver Water
1600 West 12th Avenue
Denver, CO 80204
303-628-6189
neil.sperando@denverwater.com

Lake Dillon
Bob Evans, Manager
Lake Dillon Marina
150 Marina Drive
Dillon, CO 80435
970-468-5100
bobevans@dillonmarina.com

Phil Hofer, Manager
Frisco Bay Marina
902 East Main Street
P.O. Box 4100
Frisco, CO 80443
970-668-4334
philh@townoffrisco.com

Stanley Lake

Mark Reddinger, Park Manager
City of Westminster
Parks and Recreation Department
4800 West 92nd Avenue
Westminster, CO 80031
303-425-1097
kcline@ci.westminster.co.us

Aurora and Quincy Lakes

Rick Mueller, Chief Ranger
City of Aurora
Parks and Open Space Department
15151 Alameda Parkway, Rm 4600
Aurora, CO 80012
303-690-1667
rmueller@auroragov.org

Boulder Reservoir

Stacy Cole, Acting Administrator
City of Boulder Aquatics and Reservoirs
Parks and Recreation Department
5515 N. 51st Street
Boulder, CO 80301
303-441-3461
coles@bouldercolorado.gov

Lake Granby

Dale and Tami Casteel, Managers
Beacon Landing Marina
P.O. Box 590
Granby, CO 80446
800-864-4372
beacon@rkymtnhi.com

Blue Mesa Reservoir

Ken Stahlnecker, Chief of Resource Stewardship ans Science
National Park Service
Curecanti NRA
102 Elk Creek Road
Gunnison, CO 81230
970-641-2337 ext. 225
ken_stahlnecker@nps.gov

Wolford Mountain Reservoir

Jeff Miller, Recreational Facility Concessionaire
Colorado River Water Conservation District
27219 US Highway40
Kremming, CO 80459
303-929-4412
jeff@redmtnrvpark.com

Bear Creek Reservoir

Drew Sprafke, Regional Parks Supervisor
City of Lakewood Regional Parks
15600 W. Morrison Road
Lakewood, CO 80465
303-697-6154
andspr@lakewood.org

Denver Area

Tommy Phillips, President/Owner
Tommy's Slalom Shop
3740 N Sheridan Blvd
Denver, CO 80212
720-253-2213-455-3091
tommy.phillips35@yahoo.com

Iowa:

Statewide

Kim Bogenschutz, AIS Program Coordinator
Iowa Department of Natural Resources
1436 255th Street
Boone, IA 50036
515-432-2823 ext. 103
kim.bogenschutz@dnr.iowa.gov

Idaho:

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Amy Ferrier, Invasive Species Coordinator
Idaho Department of Agriculture
2270 Old Penitentiary Road
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208-332-8686
aferriter@agri.idaho.gov

Dave Parrish, Resident Fisheries Program Manager
Idaho Department of Fish and Game
600 South Walnut
P.O. Box 25
Boise, ID 83707
208-787-2773
dparrish@idfg.idaho.gov

Lake Pend Oreille
Kate Wilson, Program Coordinator
Pend Oreille Basin Commission
120 East Lake Street, Suite 301
Sandpoint, ID 83864
208-263-4984
lakescommission@gmail.com

Priest Lake
Eric Anderson, State Representative
33 Match Bay Road
Priest Lake, ID 83856
208-265-6316
eanderso@house.idaho.gov

Kansas:

Statewide
Jason Goeckler, ANS Coordinator
Kansas Department of Wildlife and Parks
P.O. Box 1525
1830 Merchant Street
Emporia, KS 66801
620-342-0658
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Lake Kahola
Ken Kreif, Inspection Lead
Lake Kahola Zebra Mussel Committee
825 Beaver Trail Road
Derby, KS 67037
316-788-1404
kkreif@cox.net

Marion County Lake

Steve Hudson, Park and Lake Superintendent
Marion County Parks Department
#1 Office Drive
Marion, KS 66861
620-382-3240
park@marioncoks.net

Lake Wabaunsee

Sherrill Marcutie, Caretaker
City of Eskridge
20359 Allen Road
P.O. Box 156
Eskridge, KS 66423
785-449-2507
lollipop@kansas.net

Missouri:

Statewide

Tim Banek, Invasive Species Coordinator
Missouri Department of Conservation
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2901 W. Truman Road
Jefferson City, MO 65109
573-522-4115
tim.banek@mdc.mo.gov

Montana:

Statewide

Eileen Ryce, ANS Coordinator
Montana Department of Fish, Wildlife & Parks
1420 East 6th Avenue
Helena, MT 59620
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eryce@mt.gov

Nebraska:

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Nebraska Game and Parks Commission
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Alliance, NE 69301
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steve.schainost@nebraska.gov

Nevada:

Statewide

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Nevada Department of Wildlife
1100 Valley Road
Reno, NV 89512
775-688-1532
markeraw@ndow.org

Lake Mead, Lake Mojave

Bryan Moore, AIS Biologist
National Park Service
Lake Mead NRA
601 Nevada Way
Boulder City, NV 89005
702-293-8901
bryan_moore@nps.gov

North Dakota:

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New Mexico:

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Conservation Strategy Coordinator
New Mexico Department of Game and Fish
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Santa Fe, NM 87504
(505) 476-8188
barbaraj.coulter@state.nm.us

Navajo Lake, Heron L, Elephant Butte L, Couchas L

James Sandoval, Fisheries Biologist
U.S. Fish and Wildlife Service
New Mexico Fish and Wildlife Conservation Office
3800 Commons NE
Albuquerque, NM 87109
505-342-9900 ext. 112
james_sandoval@fws.gov

Oklahoma:

Statewide

Jeff Boxrucker, Assistant Chief Fisheries
Oklahoma Department of Wildlife Conservation
P.O. Box 53465
Oklahoma City, OK 73153
405-521-4606
jboxrucker@odwc.state.ok.us

Oregon:

Statewide

Randy Henry, Operations Policy Analyst
Oregon Marine Board
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435 Commercial St. NE #400
Salem, OR 97309
503-378-2617
randy.henry@state.or.us

Rick Boatner, Invasive Species Wildlife Integrity Coordinator
Oregon Department of Fish and Wildlife
Wildlife Division
3406 Cheery Avenue NE
Salem, OR 97303
503-947-6308
rick.j.boatnert@state.or.us

South Dakota:

Statewide

Andy Burgess, ANS Coordinator
South Dakota Department of Game, Fish and Parks
523 East Capitol Avenue
Pierre, SD 57501
605-773-2743
andy.burgess@state.sd.us

Texas:

Statewide

Dr. Earl Chilton, Aquatic Habitat Enhancement Program Director
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, TX 78744
512-389-4652
earl.chilton@tpwd.state.tx.us

Utah:

Statewide

Larry Dalton, ANS Coordinator
Utah Division of Wildlife Resources
1594 W. North Temple, Suite 2110
P.O. Box 146301
Salt Lake City, UT 84114
801-652-2465
larrydalton@utah.gov

Lake Powell

Mark Anderson, Aquatic Ecologist
National Park Service
Glen Canyon NRA
P.O. Box 1507
Page, AZ 86040
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Allen Pleus, ANS Coordinator
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Cheyenne, WY 82006
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dirk.miller@wgf.state.wy.us

Attachment 2: Utah Division of Wildlife Resources Self Inspection (and Certification) Form.

BOATERS MUST SELF-CERTIFY BEFORE LAUNCHING

Requirements to Prevent the Spread of Aquatic Invasive Species

A. In the last 30 days, has your boat been used, in any of the following waters, at likely affected by quagga or zebra mussels (Rule R657-60):

1. Utah: Electric Lake, Red Fleet Reservoir Yes___ No___
2. Lower Colorado River between Lake Mead & Gulf of California Yes___ No___
3. Lake Mead, Nevada and Arizona Yes___ No___
4. Lake Mohave, Nevada and Arizona Yes___ No___
5. Lake Havasu, Arizona and California Yes___ No___
6. Colorado: Lake Pueblo, Lake Granby, Grand Lake, Shadow Mountain, Willow Creek, Jumbo Reservoir and Tarryall Reservoir Yes___ No___
7. Arizona: Lake Pleasant (Maricopa County) Yes___ No___
8. California: San Justo Reservoir (San Benito County) Yes___ No___
9. Southern California's inland waters in Orange, Riverside, San Diego, Imperial and San Bernardino counties Yes___ No___
10. All waters East of the Rocky Mountains Yes___ No___
11. Other _____ Yes___ No___

If you answered "No" to all questions in Section A, Sign form and Boat is...
If you answered "Yes" to any question, DECONTAMINATE AS DESCRIBED IN SECTION B.

B. Self Decontamination (Rule R657-60)

1. • CLEAN all plants, fish, mussels & mud from boat (discard unused bait in the trash where you fished).
   • DRAIN all water from ballast, bilge, livewell & motor.
   • DRY (7 days Summer; 18 days Spring/Fall or 30 days winter) or freeze (3 days) your equipment. Yes___ No___
2. **Professional Decontamination (Rule R657-60)**
   • Use a professional to apply scalding water (140°F) to wash your boat and trailer and to flush raw water circulation systems. They must sign form.

Decontamination Company _____ Agent Signature _____ Date _____

CERTIFICATE of DECONTAMINATION

I have not used my boat in any waters listed in section A; or
I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Boater Signature _____ Date _____

PLEASE SIGN FOR SIDE OF CERTIFICATE FACING UP ON YOUR DASHBOARD
Certifying false information on this form is unlawful (Rule R657-60)

Boater must fill out a

DECONTAMINATION CERTIFICATION FORM

before launching. IT'S THE LAW!

Notice: It is unlawful (Rule R657-60) to launch a motorboat without first certifying that it has not been in a quagga or zebra mussel infested water within the last 30 days, or that the watercraft has been properly decontaminated. Place filled out certificate on dash board.

After boating, conduct these required decontamination steps:

1 { CLEAN all plants, fish, mussels and mud.
DRAIN all water (bilge, livewells, motor).
DRY (7 days summer, 18 days spring/fall and 30 days winter) or freeze (3 days) all equipment.

or

2 Use a professional to apply scalding water (140°F) to wash your boat and trailer and to flush your motor, bilge and livewells.

Stop Aquatic Hitchhikers!™

Invasive mussels will DEVASTATE boats, fisheries and recreation areas.

If you see these mussels, call 1-800-662-3337

Attachment 3: Example of a boater screening interview form, Crowley Lake Fish Camp - Los Angeles Department of Water & Power.

Los Angeles Department of Water & Power

CROWLEY LAKE FISH CAMP

Crowley Lake - Boat Use Survey

Date: _____ CF#: _____

1. What is your home state? _____ and zip code? _____

2. When was the boat last used (approximately)? _____

3. Where was the boat last used:

   A. Name of last water body: _____

      State: _____ County: _____

      Number of days in water: _____

   B. Name of the second to last water body: _____

      State: _____ County: _____

      Number of days in water: _____

      Approximately how long ago was the boat in this water body? _____

4. Have you removed vegetation and drained any water from the boat since last use?

   ○ Yes ○ No

The above is true and accurate, under penalty of perjury. I voluntarily give permission for any agent of the Los Angeles Department of Water and Power or Crowley Lake Fish Camp to thoroughly inspect the vessel referenced above for invasive species. I understand failure to comply will result in denial of ability to launch the above referenced vessel into Crowley Lake.

Name: _____ Signature: _____

Official Use Only		Inspected by:	
Description:	make and model	Inspection Result:	
Boat			
Vehicle			
Reason Denied	**(circle all that apply)**	WATER	DEBRIS MUSSELS

Attachment 4: Colorado Division of Wildlife and Colorado Division of Parks Watercraft Inspection Form.

State of Colorado

Inspection/Sample #: ☐☐☐ - ☐☐☐☐☐ - ☐☐☐☐☐☐☐
(Water Code / Date (month, day, year) / CL #)

HIGH RISK (ANS) INSPECTION FORM

For use on High Risk Trailered Watercraft

Inspection Location: _____ Date/Time: _____ Water Code: _____

Vessel Registration# (CL#): _____ Vehicle Tag #: _____ Trailer Tag. #: _____

REASON FOR HIGH RISK INSPECTION (check all that apply)

- ☐ Out of state registered or used out of state within last 30 days.
- ☐ Been in infested waters within last 30 days: _____ (Name/State of water). Days since in infested: _____
- ☐ Leaving infested waters after more than 24 hours at an infested reservoir
- ☐ Big/Complex boat ☐ Standing water present ☐ Vol Request ☐ Dirty/Crusty/Slimy below waterline
- ☐ Entering/Leaving marina ☐ Other: _____

VESSEL INSPECTION (Inspect very methodically and carefully)

Overall look and feel of the hull (check box):

☐ Clean/Smooth ☐ Bumpy/Sandpaper feel ☐ Other: _____

(If bumpy/sandpaper feel, then look at bumps with magnifying glass to see if mussels)

☐ **Vessel Exterior Checked**

- ☐ Entire hull
- ☐ Transom
- ☐ Anchors and ropes
- ☐ Water holding pockets
- ☐ Motor well
- ☐ Trim tabs (top and bot.)
- ☐ Transducers
- ☐ Depth sounders
- ☐ Recessed bolts
- ☐ Cavitations plate(s)
- ☐ Through hull fittings
- ☐ Pitot tubes
- ☐ Water intakes/Outlets
- ☐ PWC—foot recesses
- ☐ Lights

Sailboats:

- ☐ Centerboard box
- ☐ Rudder and transom
- ☐ Keel
- ☐ Fittings

☐ **Motor Checked**

- ☐ Exterior housings
- ☐ Propeller and assembly
- ☐ Propeller shaft
- ☐ Prop. shaft supports
- ☐ Propeller guards
- ☐ Rudders
- ☐ Propulsion system
- ☐ Lower unit
- ☐ Gimbel area
- ☐ Water intake/Outlets

☐ **Trailer Checked**

- ☐ Rollers, bunks, pads
- ☐ License plate
- ☐ Trailer lights
- ☐ Trailer wiring
- ☐ Trailer axels
- ☐ Trailer springs
- ☐ Fenders
- ☐ Pockets and hollows
- ☐ Wheels and tires
- ☐ Hangers

☐ **Interior/Equipment Checked**

- ☐ Bait and live wells
- ☐ Internal ballast tanks
- ☐ PFD's
- ☐ Float cushions/belts
- ☐ Rope and equipment lockers
- ☐ Anchors
- ☐ Waterfowl decoys
- ☐ Nets
- ☐ Water skis and ropes
- ☐ Other equipment

☐ **Vessel Thoroughly Drained**

- ☐ Bilge plug or pump
- ☐ Bait and live wells
- ☐ Ballast tanks
- ☐ Drain lower unit on outboard
- ☐ Drain inboard motors fully by pulling plugs.
- ☐ Drain water cooled generators, swamp coolers with plugs
- ☐ Large boats, **ask driver to activate bilge pump.**
- ☐ If **entering** a reservoir with **any** standing water and from infested or out-of-state waters in last 30 days, send to decontamination!
- ☐ If **entering** a reservoir with standing water, require draining. If vessel cannot be drained and has more than 5 gallons, send to decontamination. For lesser volumes of water, assess risk to determine whether to decontaminate.
- ☐ If **leaving**, drain and educate about Clean/Drain/Dry.

☐ **Closeout (If nothing is found)**

- ☐ Ask owner to replace bilge or other plugs
- ☐ Yell "stand clear"
- ☐ Thank them for cleaning/draining/drying

VESSEL INSPECTION FINDINGS (check all that apply)

- ☐ **Did not find** any identified or suspected ANS species
- ☐ **Found:** ☐ Large volume of water ☐ Suspected ANS in water ☐ Mussels ☐ Vegetation
- ☐ Other: _____ ☐ Location(s): _____

INSPECTION COMPLETED IN ACCORDANCE WITH STATE PROCEDURES:

Inspected by (print # and name): _____

Inspected by (signature): _____

24 **Aquatic Nuisance Species (ANS) Watercraft Inspection Handbook**

Attachment 5: Partial List of Decontamination Suppliers.

Power Wash Units and Attachments:

Hydro Engineering, Inc.
865 W 2600 S
Salt Lake City, Utah 84119
Toll Free 1-800-247-8424
Direct 801-972-1181
www.hydroblaster.com

Greenfield Industries
P.O. Box 158
Monarch, Montana 59463
406-236-5549
www.greenfield-insustries.com

Hotsy Cleaning Systems
240 Shearson Crescent, Unit 2
Cambridge, Ontario, Canada N1T 1J6
Toll Free 1-800-265-7146
Direct 519-740-1331
www.hotsyontario.ca

Ben's Cleaner Sales, Inc.
2221 4th Avenue South
Seattle, Washington 98134
877-922-4262
www.benscleaner.com

Hydro Tek Systems, Inc
2353 Almond Avenue
Redlands, CA 92374
(909) 583-9934
(909) 478-3724 fax
www.hydrotek.us

Best Marine Services
(For Power Wash Attachments Only)
12098 W 50th Pl
Wheat Ridge, CO 80033-2038
(303) 423-3311
www.bestmarineservice.com

Banding Supplies:

Christian Wenk, Customer Service
American Casting and Manufacturing Corporation
51 Commercial Street
Plainview, New York 11803
Toll Free 1-800-342-0333 x 117
Direct 516-349-7010
www.americancasting.com

Watercraft Tracking Systems (QID):

Marshal Pike
Quagga Mussel Inspections
2150 Main Street, Suite 5
Red Bluff, California 96080
530-529-1512
mp@calparksco.com

WATERCRAFT INSPECTION AND DECONTAMINATION INTERCEPTION TRAINING FOR ZEBRA/QUAGGA MUSSELS LEVEL ONE

News & Events

WIT

Contact Us

Level One WIT Training

This Level One WIT Training is directed at state, federal and local natural resource and boating agency personnel, water users of all types, law makers, policy makers, and border/ lake inspection personnel, marina operators and commercial boat transport operators.

The Level One training program gives a thorough overview of the species and problems caused, and includes information on outreach and education programs, basic mussel biology, distribution, transport vectors, mussel impacts and focuses on how to inspect for and decontaminate trailered watercraft suspected of having zebra or quagga mussels on-board.

Search for:

Search

ANS Examples

New Zealand Mudsnail

(Potamopyrgus antipodarum)

The Level One training includes 4-5 hours with one instructor utilizing a new two-part education and training video produced for this purpose, a informative presentation on national prevention programs, current issues, lessons learned from existing watercraft inspection programs, a question and answer session and a hands-on watercraft inspection exercise.

The Pacific States Marine Fisheries Commission and its state, federal, tribal and local partners will provide an instructor for this course upon request.

The primary instructor for this training is Bill Zook (See information below). In addition, graduates of Level Two training are also certified as Level One instructors. Click here for a List of WIT Level Two Graduates. You can also find this information in the Training Resources section of this website.

Bill Zook:

Bill is a retired Fisheries Program Manager for the Washington Department of Fish and Wildlife (WDFW) and for the past seven years has worked as a contract consultant for the Pacific States Marine Fisheries Commission responsible for zebra/quagga mussel outreach

and education in the western U.S. With WDFW, he established Washington's Aquatic Nuisance Species Program in the mid-1990's, a program then considered to be the model for the rest of the west. He developed the watercraft inspection and decontamination training program in 2004 and has conducted dozens of trainings since. Bill is the co-author of the Uniform Minimum Protocols and Standards for Watercraft Interception Program for Dreissenid Mussels in the Western United States (see earlier link) recently adopted by the Western Regional Panel of the national Aquatic Nuisance Species Task Force. He lives and works in Olympia Washington.

How to schedule a Level One Training for your organization:

Level One Training is provided at no charge to Federal, State and Local Government agencies for groups of 20 or more and at cost ($500-$1,000 depending on travel costs) for non government organizations.

The agency or organization that hosts a Level One training needs to provide the training facility and is responsible for recruiting and notifying course participants. In addition, the host provides one trailered watercraft for every 10-15 people attending the class that will be

used for the hands-on inspection exercise portion of the training. Click here to find a checklist of responsibilities for agencies and organizations hosting a Level One training. You can calso find this information in the Training Resources section of this website.

Everything else needed for the training is provided by PSMFC and the trainer.

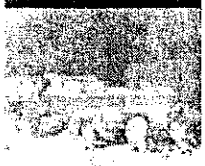
To schedule a Level One training, please contact:

Bill Zook, Pacific States Marine Fisheries Commission

(360) 427-7676

Bjzook2@msn.com

News & Events



WIT

Contact Us

Level Two WIT Training

This two-day, intensive, Level Two hands-on training is provided free of charge on a first-come first-served basis. Attendees will be responsible for their own travel expenses.

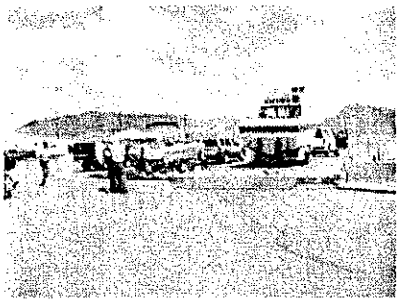
The course is designed for those individuals who are currently or will soon become active in setting-up or implementing watercraft inspection and decontamination programs for their respective agencies, organizations or businesses. The class size is restricted to 10-12 people and the focus is on actual inspections of various types of watercraft and the use of several decontamination systems. It is certified by 100th Meridian member agencies and successful graduates will be qualified as incident responders and Level One trainers.

Search for:

Search

ANS Examples

Chinese Mitten Crab



(Eriocheir sinensis)

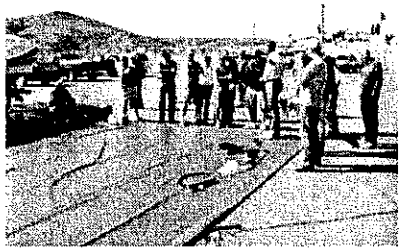
Poses a potential threat to native invertebrates and to the ecological structure of freshwater and brackish estuarine communities

Level two training is delivered over two days (12-14 hours) at Lake Mead located on the Nevada/ Arizona Border near Las Vegas. It will focus on actual field inspection of various types of watercraft leaving the lake which may or may not be contaminated with quagga mussels and the decontamination of those watercraft requiring it. The instruction will include the use of portable (low-cost) temperature controlled power wash units and a large semi-permanent self-contained power washer operated by Callville Marina for the National Park Service.

The primary Trainer for Level Two is Wen Baldwin (See below).

Wen Baldwin:

Wen is the long-time President of the Lake Mead Boat Owners Association and ANS Technical Representative for the Lake Mead National Recreation Area and consultant for natural resource agencies throughout the west. He is generally considered to be the leading expert on the inspection and decontamination of trailered watercraft in the western US. He has inspected hundreds and decontaminated dozens of quagga mussel infested watercraft in the Colorado Basin and conducted more than 30 Level One and Level Two trainings on this topic all over the west. He lives and works in Henderson Nevada.



How to sign-up for a Level Two Training:

All Level Two trainings are held at Lake Mead because of the opportunity afforded by year-round boating activity, infested watercraft and the availability of equipment and facilities. The training is offered at no charge, but each attendee is responsible for their own travel and per diem. Travel to and from the recommended hotel and training sites will be provided.

The next scheduled Level Two Training:

February 22-23, 2011

March 22-23, 2011

April 19-20, 2011

May 3-4, 2011

These trainings are scheduled on an as-needed basis, so please contact Bill Zook for information on future Level Two Training.

General Information and Schedule for Level Two Training:

You will need to book your own rooms and flights.

Recommended Lodging:

Sunset Station Hotel & Casino

1301 West Sunset Rd

Henderson, NV 89014

www.sunsetstation.com

888-786-7389

Rooms are available for $40.00 plus tax per night for the above dates. When making a reservation, mention that you are part of the WIT Responder Training group to get the group rate. Further information and instructions will be provided once you are signed up for the class.

Unfortunately, there is NO airport shuttle available.

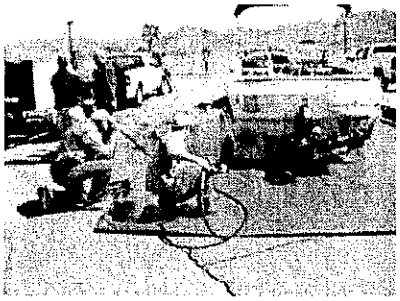
Cab fare runs around $30. If you have difficulty (cost or otherwise) obtaining suitable transportation to your hotel from the airport, contact your instructor and he may be able to coordinate shared cab fare with other trainees arriving around the same time or arrange a shuttle for you.

Transportation to and from the training site:

Transportation to and from The Sunset Station Hotel and the Lake Mead training location will be provided. The van will pick you up at the Sunset Station Hotel at 8:30 AM on day one and 8:00 AM on day two. It will return to the hotel after the day's session is over. A map of the pick-up point and other information will be in your package at registration. For those needing to go right to the airport after Thursday's session, you will be dropped off there instead of the hotel.

The only supplied transportation to and from the training site will be from Sunset Station.

Clothing: Dress for the training should be work clothes. There will be some crawling under boats on both dirt and pavement. You will also be operating hot boat washing equipment on day 2 and could (surely will) get some splash. The instructor will supply everyone with a pair of disposable/reusable coveralls that you can wear if you so desire. Footwear should have non-marking outsoles (so you don't leave marks on the boats while inspecting them) and be able to get wet without being damaged.



Schedule for Level Two Training: (Subject to change)

Lake Mead Watercraft Inspection and Decontamination Training

Responder and Trainer Training – Level Two

Day One:

8:30	AM	Shuttle from Sunset Station Hotel to Lake Mead WSC Water Safety Center – Lake Mead National Recreation Area
9:00	AM	Sign-in, coffee and doughnuts
9:10	AM	Introduction and briefing

9:15	AM	Basic inspection procedures and Q&A period - PP
10:30	AM	Break
10:45	AM	Boat inspection test
12:00	Noon	Lunch at Las Vegas Boat Harbor (Dutch)
1:00	PM	Tour docks to see impact of mussels
2:00	PM	Hands on boat inspections (depending on boat availability)
3:00	PM	Decontamination procedures (What it takes and how) and Q&A period - PP
4:00	PM	Days recap and outline for tomorrow
4:15	PM	Shuttle back to hotel - Have a good evening

Day Two:

8:00	AM	Shuttle from Sunset Station Hotel to Callville Bay Marina
8:45	AM	Briefing
9:00	AM	Hands on boat inspections and decontaminations
12:00	Noon	Lunch at Callville Bay (Dutch)
12:45	PM	More inspection and decontamination at Callville
3:00	PM	Test, Evaluations and Certification hand out
3:45	PM	Shuttle back to hotel and/or airport

To register for Level Two training, please contact:

Bill Zook, Pacific State Marine Fisheries Commission

(360) 427-7676

Bjzook2@msn.com

EXHIBIT B
BUDGET DETAIL AND PAYMENT PROVISIONS
PUBLIC ENTITIES

A. INVOICING AND PAYMENT

Contractor shall submit three copies of the invoice to the State only after receiving written notice of satisfactory completion or acceptance of work by the DWR Contract Manager. **The State will not accept an invoice for work that has not been approved and will return the invoice as a disputed invoice to the Contractor.**

Invoices shall be submitted quarterly, in arrears, bearing the contract number.

Contractor must submit three copies of each invoice to the following address in order to expedite approval and payment:

DWR Accounting Office
Contracts Payable Unit
P.O. Box 942836
Sacramento, California 94236-0001

Undisputed invoices shall be **paid** within 45 days of the date received by the DWR Accounting Office.

B. BUDGET CONTINGENCY CLAUSE

It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no further force and effect. In this event, the State shall have no liability to pay any funds whatsoever to Contractor or to furnish any other considerations under this Agreement and Contractor shall not be obligated to perform any provisions of this Agreement.

If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, the State shall have the option to either: cancel this Agreement with no liability occurring to the State, or offer an Agreement Amendment to Contractor to reflect the reduced amount.

COST SHEET

COUNTY OF LOS ANGELES
QUAGGA MUSSEL INTERCEPTION PROGRAM
PROJECTED EXPENDITURES BY FISCAL YEAR

CASTAIC & PYRAMID LAKES	*FY11-12*	*FY12-13*	*FY13-14*
Personnel Expenses	$560,808	$560,808	$560,808
Services & Supplies (S&S)			
First Year One-Time Expenses	$ 9,514.17		
Ongoing Expenses	$ 35,469.61	$ 35,469.61	$ 35,469.61
TOTAL BY FISCAL YEAR	**$605,791.78**	**$596,277.61**	**$596,277.61**

CONTRACT TOTAL - $1,798,347.00

COUNTY OF LOS ANGELES
QUAGGA MUSSEL INTERCEPTION PROGRAM
PROJECTED STAFF REQUIREMENTS and SERVICES AND SUPPLIES
FISCAL YEAR: July 1- June 30

Personnel Expenses
CASTAIC LAKE

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	Staff Hrs.	Rate	Total Costs
Cashier Clerk	1374	1259	1176	744	660	682	682	672	806	993	1389	1299	11,736	$ 14.29	$ 167,707
Lake Lifeguard	165	112	117	0	0	0	0	0	0	126	150	120	790	$ 22.31	$ 17,625
															$ 185,332
Boating Hours	15 hrs	14 hrs	13 hrs.	12 hrs	11 hrs	11 hrs	11 hrs	11 hrs	13 hrs.	14 hrs	15 hrs	15 hrs			

PYRAMID LAKE

Cashier Clerk	1530	1512	1326	1488	1100	1122	1122	1056	806	1428	1560	1560	15,610	$ 14.29	$ 223,067
Lake Lifeguard	330	224	234	120	0	0	0	0	104	252	300	240	1,804	$ 22.31	$ 40,247
															$ 263,314
Boating Hours	15 hrs	14 hrs	13 hrs.	12 hrs	11 hrs	11 hrs	11 hrs	11 hrs	13 hrs.	14 hrs	15 hrs	15 hrs			

Job Title	Rate
Cashier Clerk	$ 14.29
Lake Lifeguard	$ 22.31

SUB-TOTAL	$ 448,646
25% ADMINISTRATIVE OVERHEAD	$112,162
TOTAL	**$ 560,808**

Services & Supplies (S&S)
CASTAIC & PYRAMID LAKES

			Unit Price	*Total*
First Year One-Time Expenses				
Traffic Cones		120	$ 13.00	$ 1,560.00
Barricades Folding Type 1		25	$ 73.00	$ 1,825.00
Barricades Type A		12	$ 30.00	$ 360.00
Materials for Signs		45	$ 43.25	$ 1,946.25
Flashlights		12	$ 9.00	$ 108.00
3-step rolling ladder stand		6	$170.00	$ 1,020.00
Creeper/Roller to inspect under vessels		5	$ 86.75	$ 433.75
Vehicle Inspection Mirror w' Wheels		6	$ 99.98	$ 599.88
Easy Ups		8	$100.00	$ 800.00
Clipboards		8	$ 2.01	$ 16.08
	SUB-TOTAL			$ 8,668.96
		TAX	9.75%	$ 845.21
	TOTAL			**$ 9,514.17**
Ongoing Expenses				
Package of 1,000 Tags for boats		100	$ 35.00	$ 3,500.00
Polo Shirts		56	$ 20.00	$ 1,120.00
1000 Sheets of Information Printed Material		100	$ 37.00	$ 3,700.00
Box of 12 D Batteries		4	$ 12.00	$ 48.00
Box of Rags		4	$113.00	$ 452.00
Box of Disposable Gloves		25	$ 9.00	$ 225.00
Two-Way CWIRS Radio Service		10	$550.00	$ 5,500.00
24 ct. 1/2 Liter Bottled Water		60	$ 7.02	$ 421.20
Box 12 Pens		8	$ 11.10	$ 88.80
Equipment repair/ replacement				$450.00
Sign Repairs/ Grafitti				$400.00
Housekeeping supplies				$450.00
	SUB-TOTAL			$ 16,355.00
		TAX	9.75%	$ 1,594.61
	SUB-TOTAL			$ 17,949.61
Vehicle Fuel and Maintenance - 64 miles per day (tax included in rate)		23,360	$0.75	$ 17,520.00
	TOTAL			**$ 35,469.61**

EXHIBIT D–Special Terms and Conditions for Department of Water Resources (Local Public Entities - Payables)

1. RESOLUTION OF DISPUTES: In the event of a dispute, Contractor shall file a "Notice of Dispute" with the Director or the Director's Designee within ten (10) days of discovery of the problem. The State and Contractor shall then attempt to negotiate a resolution of such claim and, if appropriate, process an amendment to implement the terms of any such resolution. If the State and Contractor are unable to resolve the dispute, the decision of the Director or the Director's Designee shall be final, unless appealed to a court of competent jurisdiction.

   In the event of a dispute, the language contained within this agreement shall prevail over any other language including that of the bid proposal.

2. PAYMENT RETENTION CLAUSE: Ten percent of any progress payments that may be provided for under this contract shall be withheld per Public Contract Code Section 10346 pending satisfactory completion of all services under the contract.

3. RENEWAL OF CCC: Contractor shall renew the Contractor Certification Clauses or successor documents every (3) years or as changes occur, whichever occurs sooner.

4. AGENCY LIABILITY: The Contractor warrants by execution of this Agreement, that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the State shall, in addition to other remedies provided by law, have the right to annul this Agreement without liability, paying only for the value of the work actually performed, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

5. POTENTIAL SUBCONTRACTORS: Nothing contained in this Agreement or otherwise shall create any contractual relation between the State and any subcontractors, and no subcontract shall relieve the Contractor of its responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the State for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the State's obligation to make payments to the Contractor. As a result, the State shall have no obligation to pay or enforce the payment of any moneys to any subcontractor.

6. SUBCONTRACTING: "Should it be necessary to subcontract for supplemental services or specialists, the Contractor shall obtain prior written consent from DWR. If the subcontracts total more than $50,000 or 25% of the total contract, whichever is less, then the Contractor must certify that the subcontractor has been selected by the Contractor pursuant to a bidding process requiring at least three bids from responsible bidders or pursuant to the procedures set forth in Government Code Section 4525 et seq., as applicable. If Contractor is unable to obtain three competitive bids or three Statement of Qualifications, Contractor shall submit a written explanation to DWR. DWR will then decide whether to seek authorization to allow Contractor to proceed with the proposed subcontract. Contractors shall assure that all administrative fees for subcontracts are reasonable considering the services being provided and the oversight required. Contractor shall only pay overhead charges on the first $25,000 for each subcontract."

7. COMPUTER SOFTWARE: For contracts in which software usage is an essential element of performance under this Agreement, the Contractor certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this contract for the acquisition, operation or maintenance of computer software in violation of copyright laws.

8. REPORT OF RECYCLED CONTENT CERTIFICATION: In accordance with Public Contract Code Sections 12200-12217, et seq. and 12153-12156, et seq. the contractor must complete and return the form DWR 9557, Recycled Content Certification, for each required products to the Department at the conclusion of the services specified in this contract. Form DWR 9557 is attached to this Exhibit and made a part of this contract by this reference.

9. REIMBURSEMENT CLAUSE: If applicable, travel and per diem expenses to be reimbursed under this contract shall be at the same rates the State provides for unrepresented employees in accordance with the provisions of Title 2, Chapter 3, of the California Code of Regulations. Contractor's designated headquarters for the purpose of computing such expenses shall be: N/A.

10. TERMINATION CLAUSE: The State may terminate this contract without cause upon 30 days advance written notice. The Contractor shall be reimbursed for all reasonable expenses incurred up to the date of termination.

11. CONTRACTOR COOPERATION DURING INVESTIGATION: Contractor agrees to cooperate fully in any investigation conducted by or for DWR regarding unsatisfactory work or allegedly unlawful conduct by DWR employees or DWR contractors. The word "cooperate" includes but is not limited to, in a timely manner, making Contractor staff available for interview and Contractor records and documents available for review.

12. CONFLICT OF INTEREST:

    a. Current and Former State Employees: Contractor should be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.

        (1) Current State Employees: (PCC §10410)

            (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.

            (b) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.

        (2) Former State Employees: (PCC §10411)

            (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.

            (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

b. Penalty for Violation:

(a) If the Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC §10420)

c. Members of Boards and Commissions:

(a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e)

d. Representational Conflicts of Interest:

The Contractor must disclose to the DWR Program Manager any activities by contractor or subcontractor personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the contractor fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts:

Contractor should also be aware of the following provisions of Government Code §1090:

"Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity."

f. Prohibition for Consulting Services Contracts:

For consulting services contracts (see PCC §10335.5), the Contractor and any subcontractors (except for subcontractors who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of such a consulting services contract (see PCC §10365.5).

RECYCLED CONTENT CERTIFICATION FORM

To be completed by the vendor/bidder/contractor and returned to:

DEPARTMENT OF WATER RESOURCES.
Recycling Coordinator
Purchasing Services Office
1416 Ninth Street, Room 354, Sacramento, CA 95814
(916) 654-0533 FAX: (916) 653-6543

COMPANY: _____

PERSON COMPLETING FORM: _____

DATE: _____

DESCRIPTION Please include item name, brand, and product number	% POSTCONSUMER	RECYCLED MATERIAL TYPE

All businesses shall certify in writing to the contracting officer or his or her representative the minimum percentage, if not exact percentage, of postconsumer material in the productions, materials, goods, or supplies offered or sold to the state regardless of whether the product meets the minimum content requirements specified in law (see page 2 for minimum content requirements). The certification shall be furnished under penalty of perjury. The certification shall be provided regardless of content, even if the product contains no recycled material. A state agency may waive the certification requirements if the percentage of postconsumer material in the products, materials, good or supplies can be verified in a written advertisement, including, but not limited to, a product label, a catalog, or manufacturer or vendor internet website.

Public Contract Code Sections 12200-12217, et seq. and 12153-12156, et seq.

I certify that the above information is true. I further certify that these environmental claims for recycled content regarding these products are consistent with the Federal Trade Commission's Environmental Marketing Guidelines in accordance with PCC 12404.

NAME OF PERSON COMPLETING FORM	TITLE	AGENCY/COMPANY

➢ _____
SIGNATURE OF PERSON COMPLETING FORM DATE

1. Postconsumer material comes from products that were bought by consumers, used, then recycled. For example: a newspaper that has been purchased and read, next recycled, and then used to make another product would be postconsumer material.

   If the product does not fit into any of the product categories, enter "N/A". Common N/A products include wood products, natural textiles, aggregate, concrete, electronics such as computers, TV, software on a disk or CD, telephone.

2. Product category refers to one of the product categories listed below, into which the reportable purchase falls. For products made from multiple materials, choose the category that comprises most of the product by weight, or volume.

Note: **For reuse or refurbished products, there are no minimum content requirements.**

For additional information visit www.ciwmb.ca.gov/BuyRecycled/

Description Product Categories	Minimum Content Requirement
Paper Products – Recycled	30 percent postconsumer fiber, by fiber weight
Printing and Writing – Recycled	30 percent postconsumer fiber, by fiber weight
Compost, Co-compost, and Mulch – Recycled	80 percent recovered materials i.e., material that would otherwise be normally disposed of in a landfill
Glass – Recycled	10 percent postconsumer, by weight
Re-refined Lubricating Oil – Recycled	70 percent re-refined base oil
Plastic – Recycled	10 percent postconsumer, by weight
Printer or duplication cartridges	a. Have 10 percent postconsumer material, or b. Are purchased as remanufactured, or c. Are backed by a vendor-offered program that will take back the printer cartridges after their useful life and ensure that the cartridges are recycled and comply with the definition of recycled as set forth in Sections 12200-12217, et seq. and 12153-12156, et seq. of the Public Contract Code.
Paint – Recycled	50 percent postconsumer paint (exceptions when 50 percent postconsumer content is not available or is restricted by a local air quality management district, then 10 percent postconsumer content may be substituted)
Antifreeze – Recycled	70 percent postconsumer material
Retreated Tires – Recycled	Use existing casing that has undergone retreading or recapping process in accordance with Public Resource Code (commencing with section 42400).
Tire – Derived – Recycled	50 percent post consumer tires
Metals – Recycled	10 percent postconsumer, by weight

STATE OF CALIFORNIA
STANDARD AGREEMENT
STD 213 (Rev 06/03)

AGREEMENT NUMBER
4600009252
REGISTRATION NUMBER

1. This Agreement is entered into between the State Agency and the Contractor named below:

STATE AGENCY'S NAME
Department of Water Resources

CONTRACTOR'S NAME
Los Angeles County Department of Parks and Recreation

2. The term of this Agreement is: July 1, 2011 through June 30, 2014
This Agreement will not become effective until approved by the Department of General Services.

3. The maximum amount of this Agreement is: **$1,798,347.00**
One Million Seven Hundred Ninety-Eight Thousand Three Hundred Forty-Seven Dollars and No Cents

4. The parties agree to comply with the terms and conditions of the following exhibits which are by this reference made a part of the Agreement.

Exhibit A – Scope of Work	3 pages
Attachment 1, County of Los Angeles Department of Parks and Recreation Proposed Quagga Mussel Interception Program, Castaic Lake & Pyramid Lake	5 pages
Attachment 2, Quagga Mussel Inspection Program (Pilot) Summary Report	9 pages
Attachment 3, Recommended Uniform Minimum Protocols and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States	53 pages
Attachment 4, Watercraft Inspection and Decontamination Interception Training for Zebra/Quagga Mussels - Level One	10 pages
Exhibit B – Budget Detail and Payment Provisions	1 page
Attachment 1, Cost Sheet	3 pages
Exhibit C* – General Terms and Conditions	GTC 610
Exhibit D – Special Terms and Conditions for DWR (DWR 9546, Rev. 12/10)	3 pages
Attachment 1, Recycled Content Certification (DWR 9557, Rev. 1/09)	2 pages

Items shown with an Asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto. These documents can be viewed at www.ols.dgs.ca.gov/Standard+Language

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME *(if other than an individual, state whether a corporation, partnership, etc.)*
Los Angeles County Department of Parks and Recreation

BY *(Authorized Signature)* — DATE SIGNED *(Do not type)*

PRINTED NAME AND TITLE OF PERSON SIGNING
Russ Guiney, Director

ADDRESS
~~265 Cloverleaf Drive~~ 433 South Vermont Avenue
~~Baldwin Park, California 91706~~ Los Angeles, CA 90020

STATE OF CALIFORNIA

AGENCY NAME
Department of Water Resources

BY *(Authorized Signature)* — DATE SIGNED *(Do not type)*

PRINTED NAME AND TITLE OF PERSON SIGNING
Carl A. Torgersen, Chief, Division of Operations and Maintenance

ADDRESS
1416 Ninth Street, Room 605-1
Sacramento, California 95814

Approved as to legal form and sufficiency:
Asst Chief Counsel, DWR

California Department of General Services Use Only

SCOPE OF WORK

1. Introduction

This Agreement will assist the Los Angeles County Department of Parks and Recreation (LACDPR) and the Department of Water Resources (DWR) in reducing the potential for introduction of non-native Dreissenid mussel species into areas of the State Water Project (SWP) by focusing on regulating vector points-of-entry and public education. LACDPR implemented a watercraft screening program at Castaic Lake, in which vessels were evaluated for their potential to harbor Dreissenid mussels based on the vessel owners' responses to a series of questions. The program did not include physical inspection of watercraft. With funding assistance from DWR, LACDPR will implement a comprehensive watercraft inspection program that will include physical inspections of all watercraft for mussels or potential mussel-infested water at Castaic and Pyramid Lakes. It will be modeled after the California Department of Parks and Recreation (DPR) mussel inspection programs to maintain consistency among State Water Project (SWP) reservoirs.

2. Work to Be Performed

A. LACDPR will implement a Dreissenid Mussel Inspection and Education Program at Castaic Lake and Pyramid Lake as described in "County of Los Angeles Department of Parks and Recreation Proposed Quagga Mussel Interception Program, Castaic Lake & Pyramid Lake" (Exhibit A, Attachment 1).

B. Areas covered under this agreement are as follows:

Castaic Lake – Lagoon (east) Launch Ramp, West Launch Ramp, Main Launch Ramp
Pyramid Lake – Emigrant Landing Launch Ramp, Vaquero Launch Ramp

C. LACDPR will model the Dreissenid Mussel Inspection and Education Program after the programs implemented at Perris and Silverwood Lakes by DPR. DPR implemented their Quagga Mussel Inspection Program in 2008, which has served as a model for other mussel inspection programs in the Western United States (Exhibit A, Attachment 2).

D. The program will be implemented within five months of contract start date and phased in over a 10-month period from contract start date. Staff will be hired within three months of contract start date. The first three months of program implementation will focus on public education of new requirements, followed by full program implementation. Full program implementation will be completed

within 10 months of contract start date. The fully implemented program will meet "Level 3" standards as defined and described in "Recommended Uniform Minimum Protocols and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States" (Exhibit A, Attachment 3).

E. The inspection program will consist of specially trained LACDPR staff who will ask a series of questions of each boater, conduct physical inspections of each vessel that enters the park, and document those inspections. Vessels that fail inspection will not be allowed to launch into the lake. The vessel must remain dry for 7 days. Vessels that are granted lake access receive a band after exiting the lake. The band secures the boat to the trailer and ensures the boat has not been launched between visits. Boats with bands can bypass future inspections.

F. Specially trained LACDPR staff will inform and educate park visitors of the Dreissenid mussel threat and how they can help prevent the spread. Outreach methods include signage, handouts, and personal contact.

G. LACDPR staff dedicated to the watercraft inspection program will consist of Cashier Clerk and Lake Lifeguard classifications. Minimum age is 18 years. Watercraft inspection staff will not carry out duties of other positions while assigned to boat inspection and banding duties.

H. All staff conducting inspections must complete the "Watercraft Inspection and Decontamination Interception Training (WIT) For Zebra/Quagga Mussels – Level One" program (Exhibit A, Attachment 4). Training will be conducted by staff or other persons who have completed the "WIT – Level Two" program and are Certified Level Two Watercraft Inspection Trainers. Level One training will be completed within two months of hiring.

I. Watercraft inspections will occur during normal operating hours when the lakes are open for boating activity.

J. LACDPR will provide quarterly reports to accompany invoices. The quarterly reports should include the number of staff hired and trained and the number of boats inspected.

K. Funds must be used for new positions and for equipment expenses directly related to carrying out the inspection program.

L. LACDPR will provide a yearly program summary report to DWR and to DPR. The report will include monthly and yearly statistics on number of boats inspected, number of boats that failed inspection, and number of boats with visible mussels. A copy of this report will be provided to:

California Department of Parks and Recreation
Concessions, Reservations and Fees Division
P. O. Box 942896
Sacramento, CA 94296

California Department of Water Resources
Attn: Tanya Veldhuizen, Room 620
Division of Operations and Maintenance
P. O. Box 942836
Sacramento, CA 94236

M. Work shall be in accordance with this Scope of Work and the Cost Sheet, marked as Exhibit B, Attachment 1, which is attached hereto and incorporated herein

3. Project Representatives

The project representatives for this Agreement are:

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The project representatives for this Agreement may be changed by written notice to the other party.

County of Los Angeles
Department of Parks and Recreation
Proposed Quagga Mussel Interception Program
Castaic Lake & Pyramid Lake

November 2010
(Revised April 11, 2011)

Hayden Sohm
Deputy Director, Regional Facilities Agency
County of Los Angeles
Department of Parks and Recreation

BACKGROUND

Dreissenid mussels are non-native aquatic nuisance freshwater mollusks which originated in Eastern Europe. These mussels clog waterways, undermine healthy lake ecosystems, and create costly maintenance for water resource agencies. They were introduced into the Great Lakes region in 1988 through ballast water emptied from ships and have spread throughout the Midwest and the eastern portion of the United States.

Zebra mussels were discovered in San Justo Reservoir in San Benito County in January 2008; no other Zebra mussels have been detected in California. Quagga mussels were first discovered in California in Lake Mead and the Colorado River system in January 2007 and have spread to Southern California lakes connected to the Colorado River. The spread of the Quagga mussel in Southern California is believed to have advanced through aqueducts and canals via water conveyance systems sourced through the Colorado River. Not only can these invasive mussels pass through the water conveyance process, they can also be spread by two alternative methods: (1) Via adult mussels that have adhered to surfaces, such as boat hulls, and are introduced to a water body or system; and (2) Via microscopic larval forms, or "veligers", that live in the water column and can survive in water carried by recreational boats in bilges, live wells, and other boat areas where water can pool and remain, and are transported into a water body or conveyance system.

Economic Impact

The spread of the Quagga mussel in California is a significant concern due to the negative economic impacts associated with their introduction and proliferation. Quagga mussels cause the greatest economic damage when they infest pipes, pumps, or other components of municipal and industrial water supply systems or power plant cooling systems. In addition to the potential damage on water purveyance systems, Quagga mussels can seriously disrupt and negatively affect the ecosystem of freshwater lakes and rivers. Once a water system is infested, the measures required to eradicate the Quagga mussel can have serious detrimental effects on the recreational aspects of a freshwater lake or river system. In addition, preventative measures taken such as screening, inspection, and decontamination of boats, along with outright banning of boating, can also have detrimental impacts on boating and fishing and other recreational activities, as well as cause spillover effects on local businesses that derive economic benefits from these recreational activities.

LIMITATIONS TO CURRENT INTERCEPTION PROGRAM

The Los Angeles County Department of Parks and Recreation has implemented screening interviews and inspection protocols to prevent the introduction of the mussels through infested boats that recreate at Castaic Lake. Watercraft whose owners have indicated that they have recently recreated in an infected waterway must pass an inspection prior to launching. However, this approach has two primary limitations: (1) it assumes that all information provided during the screening interview is credible and (2) there is no screening or inspection program in place at Pyramid Lake, which is located just 16 miles to the north, and is the source of water for Castaic Lake. A more comprehensive mussel prevention program is more expensive to maintain and will require approximately $606,000 in additional funding.

PROPOSED VESSEL INSPECTION AND CERTIFICATION PROGRAM

The Los Angeles County Department of Parks and Recreation proposes the creation of a comprehensive vessel inspection program that will ensure that all watercraft attempting to launch at Castaic Lake State Recreation Area and Pyramid Lake will be thoroughly inspected prior to launching. This Vessel Inspection and Certification Program will increase resource protection and reduce waiting time for boaters who regularly visit our lakes.

Each vessel attempting to launch at our Lakes will undergo a thorough inspection by a trained staff member. The vessel will be checked for water in any form, (flowing or standing water) the inside and outside of the vessel will be required to be clean of all debris and completely dry, free of any moisture. Boats that fail inspection will be prevented from launching.

Once a vessel has been deemed safe, our staff will apply "bands" that connect the watercraft to the trailer so that it cannot be used between launching at our County Lakes without detection. This certification program will ensure that all craft have been thoroughly inspected, avoid redundant screening and reduce processing time by allowing staff to concentrate on watercraft that have not been previously inspected. Banding will be coordinated between the County boating lakes so that launching at all County facilities can be expedited so long as the "band" remains intact. With the cooperation of other municipalities, this program may be expanded to include multiple jurisdictions.

Protocols:

1. All vessels permitted to launch at Castaic Lake or Pyramid Lake will be inspected by a trained staff member for Quagga and Zebra Mussels. This includes all canoes, kayaks, sail boats, rubber rafts, fishing waders, float tubes, etc.
2. If a vessel is coming from an infected body of water, the owner must wait 7 days before bringing it to Castaic Lake or Pyramid Lake.
3. Only clean, drained, and dry boats and equipment will be acceptable for inspection upon arrival.
4. If a boat or any object, including but not limited to sails, life vests, and skis, on a boat is wet, damp, or moist, the vessel will be excluded for 7 days.
5. If a vessel coming from an infected body of water has not waited 7 days before bringing it to Castaic Lake or Pyramid Lake, the vessel will automatically be excluded for 7 days.
6. Only watercraft that have passed inspection will be allowed to launch.
7. Certification "banding" will be applied by a trained staff member as the vessel exits Castaic Lake or Pyramid Lake.
8. Watercraft that have been certified and banded by County staff utilizing uniform inspection and screening protocols will receive expedited processing on a return visit.

Staffing Requirements:
The County is proposing to utilize two employee classifications for this program:

The Cashier Clerk is a seasonal employee classification whose duties are primarily associated with fee collection. The minimum age for employees in this assignment will be 18.

The Lake Lifeguard is a seasonal employee classification with considerable training and experience conducting vessel safety inspections. This employee is knowledgeable in boating safety regulations; equipment requirements as well as local ordinances related to boating and would assist in conducting vessel inspections on weekends and holidays during the peak-season. This employee also has limited law enforcement authority and is better suited to deal with recalcitrant patrons. Minimum age requirement for this classification is 18.

Castaic Lake
The Castaic Lake State Recreation Area is comprised of two lakes, the Castaic Main Lake and the Lower Lagoon. The Castaic Main Lake has two launch ramps. The East Launch Ramp is open daily from sunrise to sunset and the West Launch Ramp is open on weekends and holidays from sunrise to sunset during the peak season. The Lower Lagoon has one launch ramp that is open daily from sunrise to sunset.

Off-Season and Peak-Season Weekday Staffing: There would be one cashier clerk assigned to inspect boats and an additional cashier clerk assigned to apply "bands" to boats as they exit the water. The inspection and "banding" of vessels exiting the Lower Lagoon will be carried out by County staff using existing resources.

Peak-Season Weekend and Holiday Staffing: There would be one Cashier Clerk and one Lake Lifeguard assigned to inspect boats at the Main Launch Ramp. There would be one cashier clerk assigned to inspect boats at the West Launch Ramp. There would be one cashier clerk at the Main Launch Ramp and another cashier clerk at the West Launch Ramp assigned to apply "bands" to boats as they exit the water. The inspection and "banding" of vessels exiting the Lower Lagoon will be carried out by County staff using existing resources.

Pyramid Lake
The Pyramid Lake facility is comprised of one lake with two points of entry.

Off-Season and Peak-Season Weekday Staffing: At each point of entry, there would be one cashier clerk assigned to inspect boats and an additional cashier clerk assigned to apply "bands" to boats as they exit the water.

Peak-Season Weekend and Holiday Staffing: At each point of entry, there would be one Cashier Clerk and one Lake Lifeguard assigned to inspect boats and an additional cashier clerk assigned to apply "bands" to boats as they exit the water.

Summary of Projected Labor Costs

FACILITY	JOB TITLE	STAFF HOURS	HOURLY RATE	Total
Castaic Lake				
	Cashier Clerk	11,736	$14.29	$176,707
	Lake Lifeguard	790	$22.31	$ 17,625
				$185,332
Pyramid Lake				
	Cashier Clerk	15,610	$14.29	$223,067
	Lake Lifeguard	1,804	$22.31	$ 40,247
				$263,314
			Sub Total	**$448,646**
25% Admin Overhead				**$112,162**
Total Staffing Costs				**$560,807**

Summary of Projected Operational Costs

1st YEAR COSTS				
Services & Supplies 1st Year Costs			S&S Sub Total	$8,668.88
			Tax 9.75%	$ 845.22
TOTAL 1ST YEAR COSTS				**$9,514.10**

ONGOING COSTS				
Services and Supplies Ongoing Costs			S&S Sub Total	$16,355.00
			Tax 9.75%	$1,594.61
			S&S TOTAL	17,949.61
Vehicle Fuel & Maintenance	61 mi./day	23,360 mi	$ 0.75 usage rate	17,520.00
TOTAL ONGOING COSTS				**$35,469.61**

Cross-Jurisdictional Reciprocity

The County of Los Angeles is hopeful that this program will be part of a successful collaboration with other local water resource and recreation agencies to implement a region-wide certification program that may be acceptable to most agencies/organizations in Southern California. If so, we feel that all agencies participating in this effort should, at minimum, meet the following criteria:

1. Only watercraft or equipment that have passed inspection or have been or quarantined in accordance with protocols similar to the ones mentioned in this proposal should receive certification "banding".
2. Certification banding should only be applied by a trained inspector.
3. Watercraft and equipment that have been certified and "banded" by an agency or organization utilizing these protocols and standards would receive expedited processing at the discretion of the receiving agency/organization.

Quagga Mussel Inspection Program (Pilot) Summary Report
California Department of Parks and Recreation
Park Operations
July 1, 2008 – June 30, 2010

Executive Summary

The California Department of Parks and Recreation (DPR) received $1.413 million in the 2008-2009 budget (budget item 3790-001-0516) to conduct a two year pilot program for inspection and education related to the Quagga mussel threat at its recreational operated reservoirs (reservoirs).

The California Department of Boating and Waterways (DBAW) funded the pilot program through dedicated funds. With concurrence from DBAW and the Department of Finance (DOF), DPR elected to conduct an active inspection program at two of its reservoirs in Southern California (Lake Perris SRA and Silverwood Lake SRA), and continued education efforts at other DPR reservoirs in the state. This decision was based on the following factors:

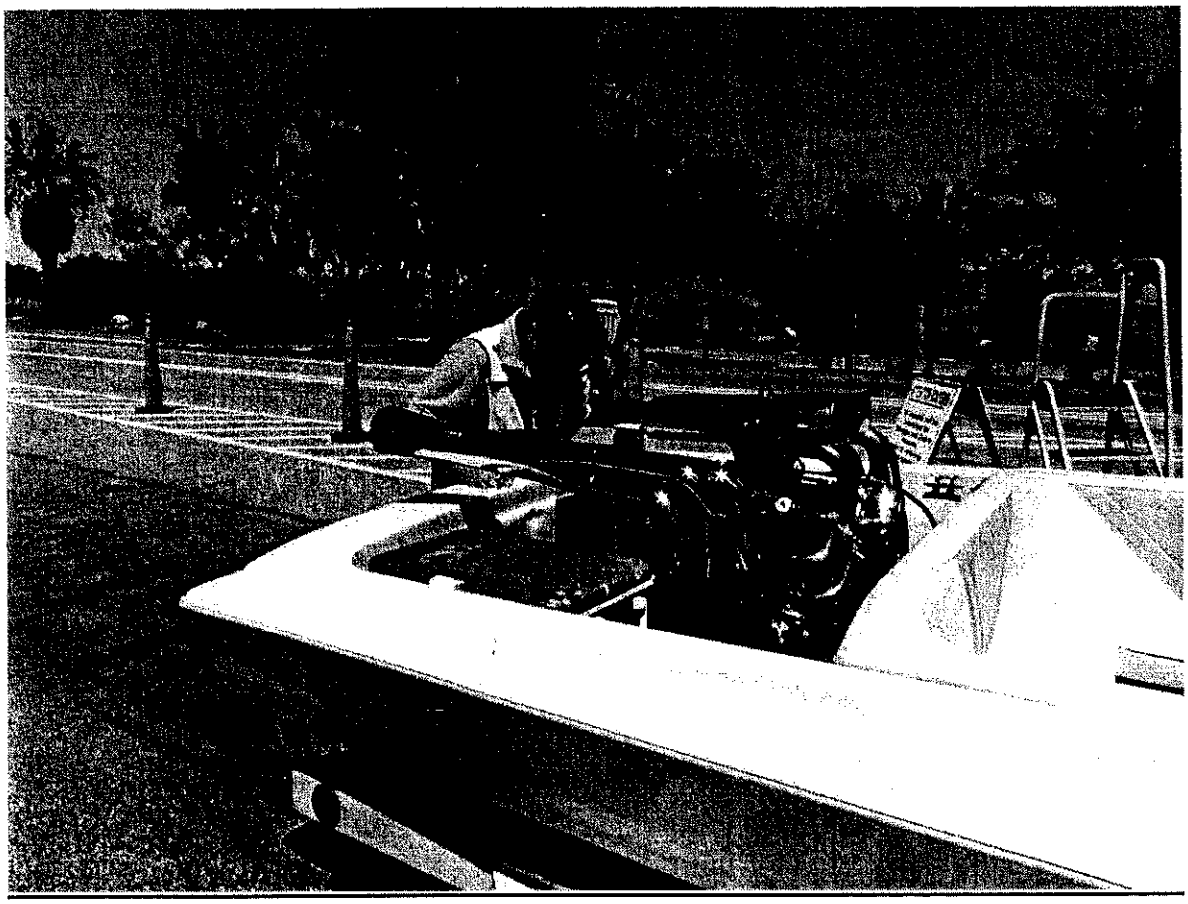
- The funding amount was insufficient to conduct a meaningful inspection program statewide.
- Most Quagga mussel infested water bodies are in Southern California in close proximity to Lake Perris and Silverwood Lake.
- The pilot allowed DPR to conduct a quality and efficient inspection program at two locations.

As part of this budget item, DPR agreed to prepare a report within a reasonable time following the completion of the pilot program. The report summarizes DPR's activities, findings and provides recommendations for future actions. These include, but may not be limited to the effectiveness of the strategies employed, appropriateness of staffing and resources, and an analysis of and the potential for alternative funding sources if the program is to be carried on into the future. The report is a public document available to the State of California's Natural Resources Agency and other interested agencies. This report meets the preceding requirement.

DPR has (and continues to) focus on preventative actions as it relates to the Quagga mussel threat. The primary threat of introduction is through vessels that visit its reservoirs and may inadvertently carry the species through previous boating activity at other infected water bodies.

DPR has been conducting a Quagga Mussel inspection program at Lake Perris and Silverwood Lake since April 2009. DPR's program has evolved very quickly into a model program for others to adopt. Not only are the number of inspections on a par with the largest program in the state (border checkpoints) but the DPR inspection

program has been widely accepted by the public. Additionally there have been no confirmed Quagga finds at either of the two reservoirs DPR's program is in place.



Background

DPR received $1.413 million in the 2008-2009 budget (budget item 3790-001-0516) for a two year pilot program for inspection and education related to the Quagga mussel threat. Funding came from Department of Boating and Waterways (DBAW) funds. This funding allowed DPR to conduct an active inspection program at two reservoirs (Lake Perris and Silverwood Lake) in Southern California, and continued education efforts at other DPR reservoirs. Lake Perris and Silverwood Lake are part of the State Water Project (SWP) which is operated by the California Department of Water Resources (DWR). DPR is responsible for recreational activities at these two lakes through an operating agreement between the two agencies. Similar recreational operating agreements exist allowing DPR operations to occur at other DWR and Bureau of Reclamation (BOR), a federal agency, owned reservoir facilities.

DPR has focused on preventative actions as it relates to the Quagga mussel threat. The primary threat of introduction is through vessels that visit its reservoirs and may inadvertently carry the species through previous boating activity at other infected water bodies.

Quagga monitoring programs at DPR's reservoirs are conducted by BOR and DWR depending on which agency has primary responsibility for the facility. DPR to a much lesser degree monitors for Quagga through an informal observational program involving visual inspections of docks, buoys, other structures and vessels.

Program Activities and Summary

Beginning April 1, 2009, DPR launched separate inspection programs at two of its reservoirs, Lake Perris and Silverwood Lake. This pilot program funded a total of 3 separate inspection stations that were staffed during each of the park's operational hours (generally 6 am to sunset).

Inspections were conducted by specially trained seasonal employees who asked a series of questions of each visitor and then conducted a physical inspection of each vessel that entered the park.

If the vessel failed an inspection (water or other wet conditions in or on the boat, a presence of Quagga, resistance to program requirements) the vessel was quarantined for 7 days and denied access to the reservoir. The owner or operator could have still entered the park as long as that boat was not launched at the reservoir. If they chose not to they were instructed to exit the park. Vessels that failed inspection were marked with a distinct tag and were allowed to reenter the park as long as the tag was intact, the boat was dry, and the correct amount of time had passed.

If the vessel passed inspection the visitor was allowed to proceed to the launch ramp and was contacted by another inspector. Paperwork was checked and the visitor was allowed to launch the vessel. If the visitor planned to revisit either of the two lakes and not go elsewhere the vessel was marked with a distinct tag that allowed the vessel to bypass the inspection station upon a return visit.

Program evaluation showed that it was very effective and well received by the public. As of the date of this report there had been no confirmed Quagga findings at either of these two reservoirs.

Preventative efforts at the other DPR reservoirs were focused on educational outreach through signage, handouts, and personal contact. DPR installed signage primarily at launch ramps and park entrance stations to help provide information and education to visitors. Although focused on the boating public, the information was readily available to

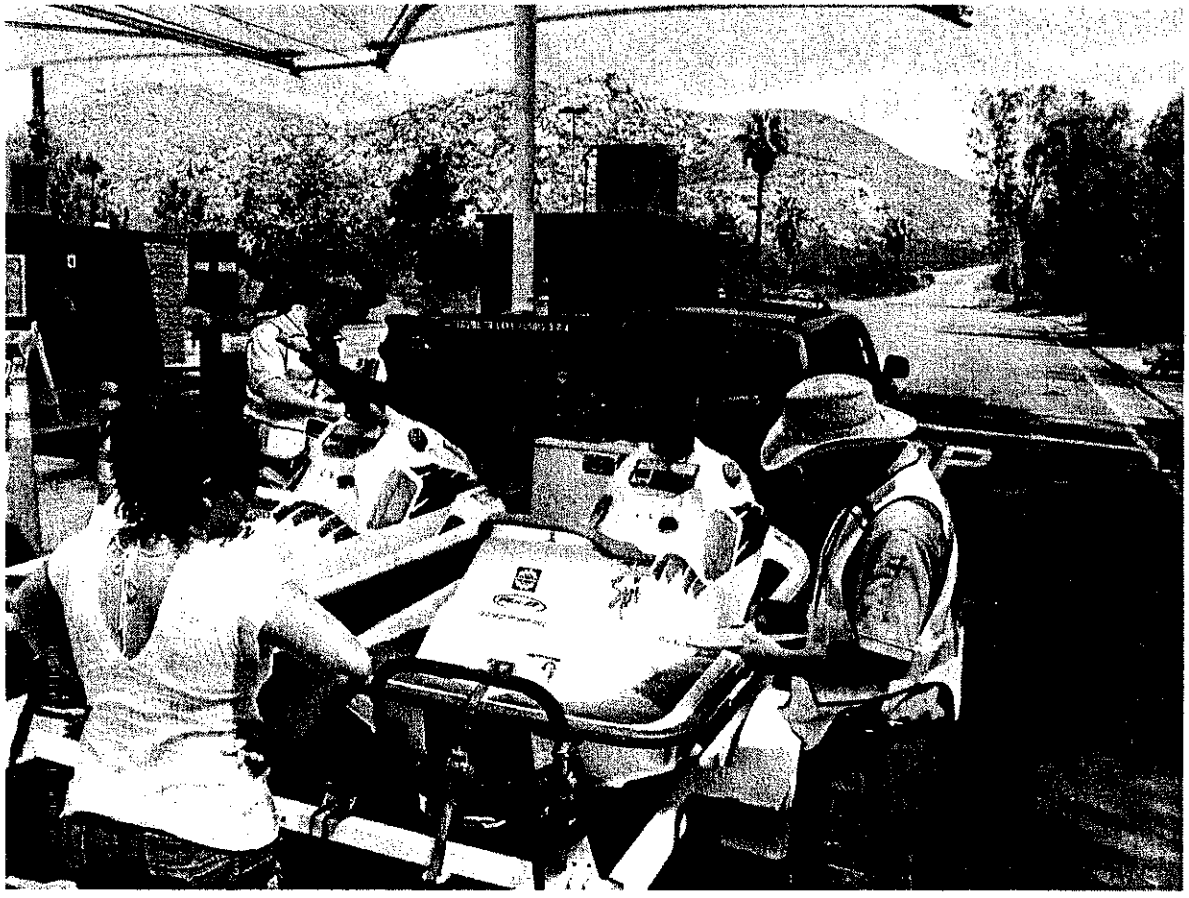
all park visitors. Rangers and other park personnel informed the public on Quagga related information through personal contact and occasional interpretive programs.

Lake Oroville is the largest DWR reservoir operated by DPR and is unique in many ways. Lake Oroville is the beginning of the State Water Project and serves as the "headwater" source for the entire system. If infected with Quagga the entire SWP could potentially be at risk through the water transfer delivery system regardless of vessel inspections. Because of the lake's size, houseboats are a common sight. Some houseboats are quite large and are transported from other areas throughout the country. These boats may have been subjected to infested waters primarily in other states and could potentially infect Lake Oroville. Staff at Oroville developed an inspection program specifically for houseboats that were brought to the lake by commercial transport. A fee was charged and a thorough inspection of each houseboat was conducted by trained personnel prior to launching at the lake. This particular program is self funded through the park's special event program and has not been funded through DBAW funds. Other inspection efforts by DPR personnel have been conducted on a limited basis at Clear Lake State Park.

Findings and Results

- *Inspection Data*

DPR conducted a total of 75,391 inspections at Lake Perris and Silverwood Lake from April 2009 thorough June 2010. The following table illustrates a month to month breakdown of inspection activity at each reservoir.



Lake Perris

Month	Inspections	Failures
April 2009	1734	230
May 2009	3410	380
June 2009	2572	284
July 2009	4298	556
August 2009	3739	540
September 2009	2715	238
October 2009	973	52
November 2009	426	18
December 2009	223	16
January 2010	299	14
February 2010	262	10
March 2010	753	28
April 2010	1397	94
May 2010	2092	279
June 2010	2526	298
Total	27419	3037

Silverwood Lake

Month	Inspections	Failures
April 2009	2669	155
May 2009	4699	77
June 2009	6004	172
July 2009	5797	153
August 2009	7131	190
September 2009	6285	81
October 2009	1617	23
November 2009	848	9
December 2009	316	3
January 2010	523	1
February 2010	451	0
March 2010	1476	20
April 2010	1494	24
May 2010	3223	96
June 2010	5439	96
Total	47972	1100

- *Program Expenditures*

Category	2008/2009	2009/2010	Total
Personal Services	$254,169	$391,944	$646,113
Operating Expense and Equipment	$567,195	$81,752	$648,947
Total	$821,364	$473,696	$1,295,060

Recommendations and Conclusions

- *Effectiveness of Strategies employed*

The pilot program conducted at Lake Perris and Silverwood Lake resulted in 75,391 vessel inspections over a 15 month period. There were exactly 4,137 vessels that were prevented from launching because of conditions that potentially could have introduced the Quagga Mussel into either of the reservoirs. As of September 30, 2010, there have been no confirmed reports of Quagga mussel infestation at either reservoir.

It should be noted that mussel infestation is not limited to vessels and there are other methods of introducing the invasive species into any of DPR's water bodies. However the most likely method of infestation is either through physical water transfer (introduction of water that has been previously infested) or through vessels that have been in infested water and then launch in non infested water. (In fact it is widely believed that Lake Mead was infested in this manner and that the lower Colorado River was then infested through water transfer from Lake Mead).

DPR feels that the pilot inspection program has been very effective at preventing a Quagga Mussel infestation at both Lake Perris and Silverwood Lake through vessel transfer. Although there are no reports of any adult Quagga Mussels on board any of the inspected vessels, the vessels denied launching privileges all had the potential of introduction of microscopic forms of the invasive pest.

DPR strongly believes that the inspection program at both Perris and Silverwood has been a success at preventing the infestation of both lakes with the Quagga Mussel.

- *Appropriateness of Staffing and Resources*

The pilot program has been implemented primarily through the utilization of a seasonal workforce supervised and supported by permanent full time staff. The seasonal workforce has been specially trained and for the most part retained on a recurring basis for the life of the program. This has allowed a consistent and experienced approach to the inspection of vessels and the delivery of message to the public. It has also been a success during very difficult budget years for the department. Equipment and other support resources for the pilot have allowed the program to function efficiently without impacting other park operations.

- *Analysis of and the Potential for Alternative Funding Sources*

The State continues to struggle with budget issues that directly impact DPR and its delivery of services. DPR is not able to directly fund the existing inspection program including the public education component with existing budgetary support.

In addition to the existing program funding through DBAW there are other potential funding sources that might be available to support inspection activities in future years.

1. Water agencies

It can be argued that nearly every water body that DPR operates for a recreational basis is primarily intended for domestic or agricultural purposes. DPR through its Quagga Mussel prevention activities (primarily inspections) is taking a proactive and effective effort at protecting those water bodies and ultimately the water agencies and customers that utilize the water. The costs of dealing with an infestation of water delivery systems are significant and ongoing. It is conceivable that DPR's prevention program could be supported by funding from the water delivery community as a component of protecting those systems. At this time there has been little effort to fund DPR's program from this source. It is beyond DPR's responsibility or capability to effectively analyze a funding mechanism that would impact the water delivery community. A cooperative and collaborative effort with that community would be the preferred method of securing a stable funding source however.

2. Inspection fees

There are instances of agencies charging users an inspection fee to support ongoing inspection programs. DPR has resisted this approach for a variety of reasons. Boaters already pay a vehicle entry fee and a separate boat launch fee for every vessel launched. These fees have risen significantly during the last few years in response to the state's budget difficulties. Additionally there are problems implementing a one time inspection fee (i.e. boats only using a DPR facility) compared to a recurring inspection fee (i.e. boats using multiple locations that may or may not be infested). The negative reaction from the public is anticipated to greatly outweigh any benefit from implementing an inspection fee at DPR facilities.

- *Conclusion*

DPR has implemented an effective and efficient Quagga Mussel Prevention Program that has been successful at preventing an infestation at Lake Perris and Silverwood Lake. Continuation of this program is an important component in protecting water quality for millions of Californians. It is also a cost effective step at protecting the State's water delivery infrastructure. Continued support of this program through the Department of Boating and Waterways dedicated funding source is critical to its ongoing success.

Recommended Uniform Minimum Protocols and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States

Prepared for the:

Western Regional Panel on Aquatic Nuisance Species

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Pacific States Marine Fisheries Commission

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Version: September 2009

Table of Contents

PREFACE

While the primary goal of watercraft interception programs must be to prevent the transfer of quagga and zebra mussels (referred to here as Dreissenid mussels) on trailered watercraft/equipment in order to safeguard natural resources, water supply, recreation and other important resources, we believe one objective of any long-term mussel interception program should also be to keep public and private waters open to boating to the greatest extent possible. While it may only take one infested watercraft or piece of equipment to establish a Dreissenid mussel population, the vast majority of watercraft are not transporting mussels. By following common sense guidelines a watercraft interception program can be established that will readily identify high risk watercraft so that more restrictive strategies can be focused where they are the most critically needed.

We realize the inherent difficulty in implementing a regionally consistent watercraft interception program. Adding to the challenge is that numerous programs are already in place, while others are in the early planning or implementation stages. In some instances, changes to regulations at the local, state and possibly federal level may be necessary to implement a comprehensive multijurisdictional program. We therefore encourage continued discussion of ideas and cooperation amongst agencies on this issue and realize that this document is one piece for consideration in tackling a complex issue.

This is a "living" document and will undoubtedly evolve as new information becomes available. We expect that the same process used for reconciliation and adoption of these protocols and standards will be employed to periodically update this document as new information becomes available (especially in regards to watercraft decontamination efficacy and new technologies).

I. BACKGROUND

Following the discovery of quagga mussels in the western United States at Lake Mead in January 2007, and their subsequent detection in downstream Colorado River reservoirs and connected waterways of the Colorado River aqueduct systems in California and Arizona, many water and resource management agencies and organizations in the western U.S. initiated watercraft interception programs to prevent the further expansion of Dreissenid (quagga and zebra) mussels into local waterways. Most of the agencies and organizations employing these programs have relied on the 100th Meridian Initiative's Watercraft Inspection Training (WIT)

program administered by the Pacific States Marine Fisheries Commission (PSMFC) for their initial training and for the development of policies, protocols and standards (http://www.aquaticnuisance.org/wit). As a result, there are similarities between many of the watercraft interception programs now being implemented in the western U.S. that are rooted in that initial training. However, variations in watercraft inspection programs exist due to the individual priorities, policies, authorities, responsibilities, budget and physical limitations of each implementing entity.

The Western Regional Panel (WRP) of the national Aquatic Nuisance Species Task Force (ANSTF), the Western States Boating Administrators Association (WSBAA), their member agencies and most organizations currently involved in watercraft interception programs in the West have recognized the need for better coordination and more consistency in the application of protocols and standards currently used to prevent the overland transport of Dreissenid mussels on trailered watercraft and equipment. To address this need, the WRP recently initiated a project to identify and assess the watercraft interception programs of all agencies or organizations that are either currently engaged in or planning to implement watercraft interception programs in 2009. A total of 72 programs employing some form of watercraft interception on about 300 waterbodies in 20 western states were identified through this effort (see **Attachment 1** for a complete list of those agencies and organizations).

Each of these agencies or organizations received an on-line survey in January 2009 designed to identify the key elements of each program and gauge support for developing uniform minimum protocols and standards. Of the 69 entities completing the survey (96% return), nearly 90% favored the development and implementation of more consistent protocols and standards for watercraft interception programs that could be applied across jurisdictional boundaries.

DEFINITION:

Watercraft Interception Program – Any program which seeks to prevent the spread of Dreissenid mussels and other aquatic nuisance species (ANS) on trailered watercraft or equipment by requiring that they be cleaned, and to the extent practical, drained and dried prior to launching.

The adoption of region-wide uniform minimum protocols and standards for watercraft interception programs is considered essential by nearly all state, federal, tribal and local agencies and organizations involved in this effort. In May 2009,

the Western Regional Panel submitted a draft "Quagga/Zebra Mussel Action Plan" to the national Aquatic Nuisance Species Task Force. The draft plan's objective is to underscore the highest priority actions and resources needed to minimize impacts of these invasive shellfish on native species, water delivery infrastructure, and other vulnerable resources in the West. One of the draft plan's highest priority action items is the development of consistent equipment inspection and decontamination protocols.

DEFINITION:

Clean - Absent visible ANS or attached vegetation, dirt, debris or surface deposits including mussel shells or residue on the watercraft, trailer, outdrive or equipment that could mask the presence of attached mussels

Drained - To the extent practical, all water drained from any live-well, bait-well, storage compartment, bilge area, engine compartment, floor, ballast tank, water storage and delivery system, cooler or other water storage area of the watercraft, trailer, engine or equipment

Dry - No visible sign of standing water on or in the watercraft, trailer, engine or equipment

Consistent protocols and standards for watercraft interception programs across the western United States would benefit water and resource managers and the boating public in a number of important ways including:

1. Increased effectiveness by ensuring that all programs utilize the best practical science and technology available.

2. Establishing a high level of confidence in the effectiveness of their own programs and trust in the programs employed by others.

3. Reducing the amount of staff time and funding required of all programs by avoiding unnecessary duplication of effort while increasing effectiveness and public acceptance.

4. Making it easier for the boating public to understand, anticipate and comply with watercraft interception and prevention programs.

Not every federal, state and local agency or organization currently has the authority or resources to implement all of the minimum protocols and standards identified here. In those cases where that capacity is lacking, we urge those groups to seek the regulatory authority and resources necessary to stop, inspect, decontaminate, quarantine or exclude high risk watercraft in order to insure protection of the natural resource, economic, public health and cultural assets that are threatened by this invasion.

In the past two years, many states including Washington, Idaho, Montana, Utah, Colorado and California have approved new legislation granting broader authority to intercept watercraft and equipment in transit. In addition, federal agencies like the National Park Service and organizations like local water and park districts have passed regulations establishing that authority within their respective jurisdictions.

While the protocols and standards recommended in this document are directed at preventing the inadvertent transfer of quagga/zebra mussels from areas where they are currently present to unaffected waters on trailered watercraft and equipment, their application will help prevent the spread of other Aquatic Nuisance Species (ANS) as well. The screening, inspection, decontamination and quarantine/drying actions described here to reduce the risk of mussel transfer are also effective for reducing the risk of overland transport of invasive aquatic vegetation, fish, disease pathogens, plankton species and other ANS.

IMPORTANT REMINDER, EDUCATION:

While watercraft interception programs are an important public outreach and education vehicle, all agencies and organizations must also recognize the need to use other outreach strategies to make boaters more aware of the importance of preventing the spread of aquatic nuisance species such as zebra and quagga mussels and what role they can play in those prevention efforts. A watercraft interception program by itself is not sufficient to gain public involvement, support and cooperation. Public outreach and education should be the cornerstone of all state, federal and local mussel prevention programs.

II. APPROACH

The protocols and standards recommended here are the products of:
(Please refer to the References section on page 28):

1. An extensive research review

2. Results from a WRP survey of watercraft/equipment interception programs in the 20 western states completed in February 2009

3. A review of individual agency/organization policies, procedures and standards; and

4. The experience gained from more than 40 Watercraft Inspection and Decontamination trainings delivered to over 2,000 individuals representing 95 different agencies/organizations in 12 western states over the past two years, and the extensive contact network established through that (WIT) training program.

Protocols and standards have been identified for seven possible elements of watercraft interception programs:

1. Self-Inspection (Voluntary/Mandatory): A self-inspection program can be implemented alone or as an "off-hours" adjunct to a more direct and comprehensive interception program. This type of program involves requiring (mandatory) or requesting (voluntary) the cooperation of individual watercraft operators to complete an inspection of their vessel prior to launching by following a set of instructions and completing a checklist provided at an entry station or kiosk.

2. Screening Interview: The screening interview involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk based on the recent history of use for the subject watercraft or piece of equipment. This should be an element of every intervention program that includes individual contact.

3. Watercraft/Equipment Inspection: A close visual and tactile inspection of all or selected watercraft focused on all exterior and interior surfaces, areas of standing/trapped water, trailer and equipment to determine the presence or likelihood of mussel contamination.

4. Decontamination: The process of killing and removing all visible mussels and, to the extent practical, killing all veligers and remaining mussels from every area of watercraft, trailer and equipment.

5. Quarantine/Drying Time: The amount of time out of the water required to assure that all mussels and veligers are killed through desiccation. This time requirement varies widely depending on temperature and humidity conditions.

NOTE ON BALLAST TANKS:

Areas that can maintain water or moisture for extended periods like ballast tanks and other hard to access and drain water storage areas do not dry sufficiently using the prescribed drying time standards referenced in this report. When ballast tanks or other inaccessible water storage areas are present, specific hot water treatment of these areas must be required for all high risk watercraft (See pages 18-20 for specific procedures to be followed).

6. Exclusion: Not allowing watercraft or equipment to be launched. In extreme cases, exclusion can be applied to all watercraft, but in most cases, it is applied to only watercraft and equipment that are considered to be high risk, when other options are not available.

7. Certification: A process whereby watercraft/equipment are determined to present minimal risk based on inspection, decontamination or quarantine/drying time and receive some visible form of certification of that fact (e.g., trailer tag, sticker, band, etc.). It is important to note that it is not possible to certify watercraft are "free of mussels," only that the most current and effective protocols and standards have been applied to kill and remove all visible mussels and veligers.

Not all agencies and organizations currently implementing watercraft interception programs employ all of these elements. In fact, less than half of those surveyed employ four or more of these elements in their programs.

DEFINITION:

High Risk Watercraft/Equipment – Any vessel or piece of equipment that operates on or in the water that has been used in any waterbody known or suspected of having zebra or quagga mussels in the past 30 days or any watercraft or equipment that is not clean, and to the extent practical, drained and dry.

NOTE: Watercraft/equipment that have been moored or been in the water for several days or longer pose the highest level of risk for attached mussels, while all watercraft with on-board raw water systems present some elevated level of risk for veliger contamination regardless of the length of exposure. Generally speaking, the longer the period of exposure, the higher the risk.

III. Recommended Program Levels

Many agencies and organizations do not have the capacity to implement state-of-the-art programs that include all possible watercraft interception elements. Funding limitations, lack of access control or authority, and/or the level of political understanding and will, all play a role in determining whether a water or resource management agency decides to become proactive enough to implement a watercraft interception program and how extensive that program will be. However, in those situations where the risk is high, the potential savings from preventing a mussel introduction far outweighs the cost of implementing even the most comprehensive interception program.

Because of funding/staffing or authority limitations, a number of western agencies and organizations employ only random, periodic or peak-time interception programs. These programs have obvious limitations so, it is vitally important that agencies and organizations implementing this type of program also complete risk assessments on all major waterbodies and use that information to direct those limited efforts to waters with the highest risk of contamination.

It is also important that, to the extent practical, these programs follow uniform minimum protocols and standards for all elements of their interception programs and consider adopting more inclusive, but cost-effective, programs like volunteer or mandatory self-inspection while seeking more public, political and financial support for expanded programs as the threat continues to increase with each new mussel discovery.

DETERMINING INDIVIDUAL WATERBODY RISK LEVEL:

High Risk Waterbody – The determination of a "high risk waterbody" is the prerogative of the responsible management entity. Some of the factors used to determine risk potential include:

Whether water quality parameters (e.g., calcium) will support the survival, growth and reproduction of dreissenid mussels (these may vary within a given waterbody)

The amount and type of watercraft activity

Proximity to dreissenid positive or suspect waters

When the water in question is a headwater, water or power supply system or supports listed species (These waters warrant special consideration is warranted because the impacts of mussel contamination can have consequences far beyond local impacts).

It is the responsibility of water and resource managers to determine the level of acceptable risk and which type of watercraft interception program most closely reflects the mission and values of their agency or organization. However, consideration for the investments made by neighboring water and resource managers should not be overlooked when seeking support for interception programs. A common concern raised by survey recipients and WIT training program attendees is that up-stream or neighboring managers aren't doing enough to protect those systems, putting their investments and resources at risk.

We recommend the following three program levels for watercraft/equipment interception programs depending on the risk level and individual agency/organization capacity:

Level 1 (Self-Inspection): Relatively low cost program for low risk waters or on higher risk waters where organization or physical capacity prevents a more aggressive approach.

As an example, we recommend either a voluntary or mandatory self-inspection program similar to the one developed by the Utah Division of Wildlife Resources and in use at over 100 secondary risk waters in that state. Mandatory programs work best if the authority to enforce provisions of the program (*e.g.*, authority to require that all watercraft operators complete and post self-certification form) are

in place. In the absence of that authority, a voluntary program should be implemented.

This type of program involves the dissemination of an inspection form which can be made available at either an entry station, kiosk or message board with boldly printed instructions for the watercraft/equipment operator to answer all the questions and inspect all designated areas and equipment. The form is then placed in or on the transport vehicle where it can be easily seen. See **Attachment 2** for the form used by the Utah Division of Wildlife. If the program is mandatory, spot checks by enforcement personnel can reinforce compliance.

Self-inspection programs can be implemented for under $1,000/year in most areas and for under $25,000/year for an entire state. Including staff time for verifying and/or enforcing compliance can add to both effectiveness and cost.

Level 2 (Screening out high risk watercraft and equipment): Moderate to high risk waters where budget or other issues prevent a more comprehensive (Level 3) program.

We recommend a program that includes a screening interview to identify high risk watercraft and/or equipment, an inspection to verify interview information and exclusion of any watercraft/equipment that remain high risk following screening and inspection.

This type of program can often be incorporated into an existing entry station operation that is set-up to collect access fees, confirm reservations or provide use information and regulations. Current entry station staff can be easily trained to conduct verifying inspections and the number of watercraft excluded would normally be expected to be low on waters where this type of program would be implemented. Because a rigorous inspection is not required and no decontamination or quarantine facilities are required, this is a relatively low cost option for some agencies/organizations.

Programs like this typically cost between $5,000 and $50,000 a year to operate per water body and are a relatively low cost option.

NOTE ON LEVEL 1 AND LEVEL 2 PROGRAMS:

Level 1 and Level 2 programs are options for local jurisdictions when the capacity to implement more aggressive and effective programs is lacking. These programs, however, do not provide the level of security required for any type of cross-jurisdictional reciprocity because they do not offer any assurance that watercraft and/or equipment subjected to either type of program are, to the extent practical, free of mussels or other ANS.

Level 3 (Comprehensive): High risk waters and wherever possible.

We recommend this type of program for all high risk waters. A Level 3 program should include screening interviews at the point of entry; a comprehensive watercraft/equipment inspection performed by trained inspectors of all high risk watercraft/equipment; the decontamination and/or quarantine or exclusion of suspect watercraft, and may include vessel certification.

This type of program may require construction or modification of entry facilities, purchase of a hot water powerwash and wastewater containment system, hiring trained inspectors and decontamination operators and provision of a quarantine facility, along with a set of policies and rules that allow all of the above actions. Programs like this can cost between $50,000 and $250,000 per waterbody per season to operate depending on the size of water involved, type of equipment and facilities used, hours of operation and the number of access points.

IV. Uniform Minimum Protocols and Standards

The term **"Uniform Minimum Protocols and Standards"** implies that all agencies/organizations should strongly consider adoption of these as integral components of their Watercraft Interception Program. **However, because each entity is unique; having different missions, authority, resources, facilities and governing bodies, it is understood that additional or stricter standards may be implemented and that cross-jurisdictional reciprocity should be left to the discretion of the implementing agency/organization.**

DECONTAMINATION SAFETY ADVISORY:

Extreme caution should always be used when working in and around watercraft and equipment. This is particularly true when working with some of the high pressure equipment and the high water temperatures recommended here.

These protocols and standards reflect the best currently available science, technology and understanding. However, we recognize that watercraft interception and decontamination is a rapidly evolving field and that new information may change the way we view watercraft interception and decontamination in the future. There are at least two research projects currently in the planning stages that we expect will provide a better understanding of the effectiveness of current technology and the viability of alternative decontamination strategies.

We recommend the following Uniform Minimum Protocols and Standards for watercraft interception programs in the western United States:

IVa. Self-Inspection (Mandatory or Voluntary)

Self-inspection programs, whether voluntary or mandatory, offer a limited level of protection because compliance and effectiveness are not guaranteed. However, self-inspection programs are very effective boater education tools, provide some level of protection for waters where implemented, and are cost-effective. If a higher level of protection is not available because of insufficient funding, physical site limitations, lack of intervention authority or the sheer volume of waters needing coverage, the type of program currently implemented by the Utah Division of Wildlife Resources on approximately 100 of their secondary risk waters should be considered as a **minimal** interception tool or "off-hours" adjunct to a more comprehensive program.

Protocols:

1. Provide a self-inspection form and clear directions on how to complete the inspection and form at the point of entry, kiosk or dedicated check-in area.

2. Require (where a law/rule is in place) or request (when rules are not established) that the form be completed, signed, and posted in clear view on the watercraft/equipment transport vehicle prior to launching.

Standards:

Before launching, boaters must confirm that the following conditions have been met by signing and displaying a completed self-inspection form.

1. Watercraft, equipment, trailer have not been in any water known or suspected of having quagga/zebra mussels in the past 30 days.

2. Watercraft, equipment, trailer are cleaned, and to the extent practical, drained and dried.

3. Watercraft, equipment, trailer have been visually inspected at the site prior to launching.

IVb. Screening Interviews

The screening interview [see **Attachment 3** for an example of a screening interview/boater use survey form from Crowley Lake Fish Camp – Los Angeles Department of Water & Power] involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk posed by that watercraft based on its recent history of use. This should be an element of every intervention program where personal contact with the watercraft/equipment operator is made.

In order to be most effective, the screening interview should not rely totally on the responses given, but the person conducting the interview should be attentive enough to make sure that the responses given match the physical evidence available and are credible.

Protocols:

1. Develop and use a standard screening interview form that, at a minimum, includes the following questions:

    - The home location of the owner/operator

- The specific location (waterbody) where the watercraft or equipment was last used
- The date of the last use
- If the watercraft/equipment has been cleaned, drained and dried

2. Verify the responses by checking the license plate or registration (boat ID) number and doing a quick visual inspection and clarify any inconsistencies between the responses given and the physical evidence before clearing the watercraft or equipment for launch.

3. The screening interview provides all agencies and organizations implementing interception programs the opportunity to explain the importance of prevention and to educate the boating public on ways they can take personal responsibility for "clean" boating.

Standards:

1. Watercraft that have been used in any Dreissenid mussel positive or suspect waterbody in the past 30 days should be subjected to a comprehensive inspection by a trained professional before being allowed to launch.

2. If there is reasonable suspicion of deception on the part of the owner/operator/transporter during the screening interview, the vessel shall be subjected to a comprehensive inspection before being permitted to launch.

IVc. Watercraft/Equipment Inspection

Inspecting watercraft and equipment for the presence or likelihood of Dreissenid mussels is perhaps the most important and difficult element of a successful interception program. Conducting an effective inspection requires some knowledge of Dreissenid mussel identification, life history and biology, a good understanding of the working parts of a watercraft and the cooperation of the boat/equipment operator. In addition, watercraft and equipment inspection needs to be systematic and thorough. A checklist should always be used when conducting a watercraft or equipment inspection in order to assure that all areas where mussels and veligers can be found are inspected.

A basic watercraft inspection and decontamination course, like the Level One course offered by the Pacific States Marine Fisheries Commission and certified by

the 100th Meridian Initiative (http://www.aquaticnuisance.org/wit) is highly recommended for anyone who will be directly involved in watercraft inspection. An advanced training (Level Two) should be taken by at least one agency/organization representative engaged in or planning to become engaged in watercraft interception. The 100th Meridian Initiative Level Two training comes with the tools and resources necessary to become an in-house Level One trainer.

The authority to stop, inspect, decontaminate and/or quarantine watercraft or equipment varies between jurisdictions. Make sure you understand the authority you have in your jurisdiction and exercise it according to the law with regard to search and seizure.

Protocols:

1. Use an inspection checklist and follow it. The inspection checklist should include (at a minimum) the following information (See **Attachment 4** for the inspection form used by the Colorado State Parks):

    - The home state or area code where the watercraft or equipment is registered
    - The vessel ID number
    - The name and date of the last water visited
    - A checklist of areas to be inspected, including all of the following:

        Exterior Surfaces: (at and below the waterline)
        Hull, transducer, speed indicator, through-hull fittings, trim tabs, water intakes, zincs, centerboard box and keel (sailboats), foot-wells (PWCs)

        Propulsion System:
        Lower unit, cavitation plate, cooling system intake, prop and prop shaft, bolt heads, gimbal area, engine housing, jet intake, paddles and oars

        Interior Area:
        Bait and live wells, storage areas, splash wells under floorboards, bilge areas, water lines, ballast tanks, drain plug

Equipment:

Anchor, anchor and mooring lines, PFD's, swim platform, wetsuits and dive gear, inflatables, down-riggers and planing boards, water skis, wake boards and ropes, ice chests, fishing gear, bait buckets, stringers

Trailer:

Rollers and bunks, light brackets, cross-members, license plate bracket, fenders

2. Inspect all high risk watercraft (See definition on page 8).

3. Have a systematic plan when conducting inspections to ensure complete coverage of every area of the watercraft.

4. Use the opportunity to educate the boat owner/operator on the importance of pre-launch self-inspection, proper cleaning and drying and the reasons why all watercraft and equipment operators need to clean, drain and dry watercraft and equipment when moving between waters.

Standards:

1. If attached mussels or standing/trapped water are found on a high risk vessel, it should not be allowed to launch without first being decontaminated or subjected to the prescribed quarantined/drying time standard or both.

2. If water is found on exposed areas only (rain or wash-water), on an otherwise low risk and clean watercraft, the watercraft should be thoroughly wiped dry first, but allowed to launch.

3. If no mussels or water are found following a thorough inspection of the watercraft that is considered high risk because it has been in known mussel waters within the last 30 days, but has been out of the water long enough to be considered safe by applying drying time standards, it should be allowed to launch, **except for watercraft that have ballast tanks or other difficult to access and completely drain water storage areas. Normal drying time standards do not apply when areas that cannot be completely drained are present. These areas need to be treated to kill any mussels or veligers that are present.**

4. Any watercraft or piece of equipment with attached vegetation (including algae growth) should not be allowed to launch without their complete removal and re-inspection, if necessary.

NOTE ON LIVE BAIT FISH:

If the use of live bait fish is permitted in your jurisdiction and they are found during inspection, remove the bait, place in a bucket of clean water, drain and flush the live bait container with hot water and then return the bait to the clean container (while this system does not assure that mussel veligers or even small settlers are not present on the fish themselves, it is the best "minimum" standard for dealing with this situation currently available).

IVd. Watercraft/Equipment Decontamination

If, following inspection, a watercraft or piece of equipment transported from one waterbody to another is confirmed or believed to have mussels on board, three options are available: 1) decontamination, 2) quarantine/drying, 3) exclusion. Decontamination is the only option that kills and removes mussels. Since we cannot be sure that all areas of the watercraft and/or equipment have been adequately treated, we recommend that a period of drying (using the 100th Meridian Initiative quarantine time calculator or the table on page 23) be used in conjunction with decontamination for all watercraft confirmed or suspected of having mussels on board.

There are a number of ways to decontaminate watercraft, but with the current technology available, we recommend the exclusive use of hot water (140 degrees Fahrenheit or greater at the point of contact) and pressure washing equipment with various attachments to kill and remove all visible mussels (live and dead) and veligers from all areas of the watercraft, engine, trailer, and equipment. [Note: Even though concerns have been raised about the efficacy and safety of hot water pressure washing (Morse 2009), the reality is that many programs throughout the West have already invested in these systems and it will continue to be a primary management tool for at least the near term. Other methods to decontaminate watercraft are currently not available nor produced on a large enough scale to be economically feasible. We do not believe that relying solely on aerial exposure and desiccation as the primary means of decontamination is feasible given the thousands of watercraft that are moving around the west on a daily basis.

Desiccation also will not remove dead mussels (see below). However, we do encourage and support the combination of drying time and hot water decontamination as the most effective means to assure that all mussels are killed, and to the extent practical, all visible mussels are removed.]

The objective of decontamination is to KILL and REMOVE, to the extent practical, all visible mussels. Killing prevents establishment of new populations as a result of watercraft/equipment transfer, but, removing them is also important because a false positive finding may result from the presence of mussel shells (or DNA in samples collected for genetic (polymerase chain reaction {PCR}) analysis, even though they are dead. This can result in unnecessary concern and expensive action if unexplained shells drop or are scrapped-off the hull and are subsequently discovered at a boat ramp or the lake bottom, or if a watercraft is intercepted in transit. Furthermore, there are no standard protocols in place to easily confirm the viability of attached mussels within the context of a watercraft inspection or decontamination. Therefore, mussels on watercraft or equipment that appear to be dead do not necessarily indicate that those mussels, or others not clearly visible settled elsewhere, are in fact dead.

Protocols:

1. Before commencing a decontamination procedure, get the permission of the vessel owner after explaining the options and process in detail.

2. Find a location for the decontamination that is away from the water where the run-off and solids from the cleaning process can be contained and will not re-enter any waterbody.

3. If possible, wastewater and solids should be totally contained (low-cost containment systems now exist for this purpose) and directed to an appropriate waste treatment or disposal facility (new guidelines are currently being developed by the EPA for this application).

Standards:

1. Use 140 degree Fahrenheit or hotter water (at the point of contact) to kill mussels and veligers. Water loses approximately 15-20 degrees F per foot of distance when sprayed from a power nozzle, so initial temperature should be increased to account for this heat loss to the point of contact.

2. When using a hot water flushing attachment and/or pressure washer to kill and remove attached mussels from the surface of watercraft/equipment, allow **at least** 10 seconds to elapse from the leading edge of the spray to the tailing edge when moving the wand across the surface to maintain sufficient "lethal" contact time. If larger mussels are present, it may require more time to remove them from the surface.

NOTE ON "HIDDEN" MUSSELS:

It is not normally possible to remove all attached mussels from every area of the watercraft/equipment. The standard is to remove all "visible" mussels. A day or two following a very thorough decontamination, it is not unusual for mussels to appear as byssal threads begin to decompose and mussels slide out of hidden areas to become visible. In addition there are some areas of almost any watercraft or piece of equipment that cannot be easily accessed to remove dead mussels. If properly treated, these mussels are dead and in the process of decay. Brushes may be used in conjunction with flushing in some of these areas when doing the initial decontamination to reduce (not eliminate) this from occurring.

3. Use a power wash unit capable of spraying at least 4 gallons/minute with a nozzle pressure of 3,000 psi or greater (not to exceed 3,500 psi) to remove attached visible mussels from all exposed surfaces of the watercraft, piece of equipment, trailer and engine.

4. Use a flushing attachment to rinse all hard to reach areas and those areas where pressure may damage the watercraft or equipment (such as the rubber-boot in the gimbal area). A brush may also be used in conjunction with flushing to remove more mussels from hard to access areas.

5. When flushing hard to reach and sensitive areas, maintain a contact time of 60 seconds to assure that mussels receiving only indirect contact are killed since it may not be possible to remove them from these areas.

6. First drain and then use a flushing attachment and 140 degree water to flush the live well, bait well, storage compartments, bilge areas, ballast tanks, bladders, gear and equipment to kill any mussels and veligers that might be present.

7. Use appropriate attachment connected to the powerwash unit or other hot water source, start the engine and run for 1-2 minutes to kill mussels in the engine cooling system.

WARNING ON ENGINE COOLING SYSTEMS:

Marine engine cooling system pumps and engines are not designed to operate at less than seven gallons per minute (gpm) over an extended period, and most current power wash units are not designed to deliver more than five gpm. Therefore, when using a power wash unit for this purpose, it is important to limit run-time to **one to two minutes** to avoid any possible engine/pump damage. No such limitation exists if an outboard is "tank run" in hot water without the use of a power wash unit.

There must be enough volume to properly supply an engine's cooling system in order to keep them from overheating. Five gpm will suffice as long as the engine is idling. In all cases, the operator must watch the temperature gauge during the flushing process. The person who is doing the decontamination should monitor the water being discharged from the engine with a handheld temperature gauge to make sure that the discharge temperature is at least 140°F. Volume is critical as is constant temperature monitoring.

IVe. Quarantine or Drying Time

If watercraft and/or equipment suspected of carrying zebra or quagga mussels cannot be decontaminated for any reason, then they must be held out of water for a period of time to dry-out and kill all mussels and veligers on-board through desiccation. The amount of time required to achieve complete desiccation varies depending on temperature and relative humidity and can range from 3-30 days (McMahon, Personal Communication).

Quarantine/drying is probably the most effective way to assure that live mussels are not transported between waterbodies on trailered watercraft or equipment. The problem with quarantine/drying is that it does not remove attached mussels. If mussels remain on the vessel, they will eventually drop off. If that occurs at a boat ramp or beach, the presence of mussel shells can raise concern of a new infestation, triggering alarm and resulting in expensive and unnecessary action. For that reason, we recommend that all visible mussels be removed from quarantined/dried watercraft before they are allowed to launch.

NOTE ON TREATING BALLAST TANKS:

Remember, drying time does not apply in the same way to watercraft with ballast tanks or other water storage areas that are not easily accessed and cannot be completely drained. If these areas maintain water, then the actual time required to achieve 100% mortality either through desiccation or anoxia will most likely exceed the drying time standards recommended here. In those cases, after draining, remaining water should be treated with hot water. Some ballast system manufactures have indicated that their pumps and/or other system components are designed for temperatures of no more than 130 degrees. For that reason, we recommend treating these areas last after reducing the water temperature and flooding the area with 120-130 degree hot water. Since these areas typically contain only small volumes of un-drained water, the dilution rate and resulting temperature drop should not prevent lethal treatment temperatures from reaching any living mussels or veligers. To maintain lethal temperatures for a long enough time to achieve 100% mortality it is important to pump water through the area for at least one to two minutes and monitor the exiting water temperature with a handheld temperature gauge.

The 100th Meridian Imitative has developed a quarantine time calculator based on research preformed by Dr. Robert McMahon and others at the University of Texas, Arlington. That calculator is available on the organization's website, http://www.100thmeridian.org. When practical, we recommend using this standard for determining the length of quarantine or drying time (except when ballast tanks or other inaccessible raw water storage systems are involved) needed to assure that a watercraft or piece of equipment is safe to launch. When this level of precision is not practical for field operation, a second standard is also recommended below.

Protocols:

1. Requiring quarantine, drying time or a waiting period should be applied to watercraft and equipment that meet the definition of high risk; either in lieu of decontamination or in addition to decontamination as an "insurance policy."

2. Implementation of this option can take several forms.

    - Physically quarantining a watercraft or piece of equipment requires providing a safe and secure holding area where they can be "parked" for the amount of time required to kill all mussels on-board. A few agencies/organizations have used this option to take or over-see possession of suspect watercraft (with or without the owner's permission, depending on individual jurisdiction authority) until they remain out of the water long enough to be considered safe. Establishing and maintaining a dedicated quarantine facility can be expensive and comes with some potential liability issues.

    - When a quarantine facility is not available, then quarantine/drying time can be achieved by banding (secured connection between watercraft and trailer) the watercraft or equipment. The operator is advised not to launch into any freshwater area until the date indicated on the "band" or an accompanying paper certificate ((this form of quarantine does not require a holding facility).

    - The final option is simply to require that all high risk watercraft serve a pre-determined drying/waiting period prior to launch (duration determined by risk level and current temperature and humidity conditions).

3. All visible mussels should be removed from watercraft or equipment following quarantine or drying period before being allowed to launch.

Standards:

1. Where practical, the 100th Meridian Initiative quarantine time "calculator" should be used to determine the length of quarantine/drying time required (provides the greatest precision but limited availability and predictability for boaters).

2. When the use of the "calculator" is not practical, the standards below should be applied to determine the length of the quarantine/drying time required (Note: information provided in the following table was developed in cooperation with Dr. Robert Mcmahon, University of Texas, Arlington).

3. Watercraft with ballast or other internal water storage tanks that cannot be completely drained should be treated differently (See page 21).

Maximum daily temperature Degrees Fahrenheit	**Minimum days out of water**
< 30	3
30- 40	28
40-60	21
60-80	14
80-100	7
>100	3

NOTE: Add 7 days for temperatures ranging from 30-100 degrees if relative humidity exceeds 50%

IVf. Watercraft/Equipment Exclusion

High risk watercraft which are not decontaminated and/or quarantined should be excluded and not allowed to launch; whether the result of vessel owner refusal, or lack of available equipment, trained applicators or facilities. Exclusion should not be used as a long-term substitute for development of a more user-friendly interception program that recognizes the value of recreational boating to the economy, and the legitimate interests of the boating public.

In the two years since Dreissenid mussels were first found in the western U.S., many agencies and organizations responsible for water and recreation management have resorted to the use of exclusion to protect those resources from the mussel threat. The case for doing so is certainly understandable given the lag time needed to develop public policy, establish regulations, budget, train staff and purchase equipment needed for more proactive and considerate approaches.

Protocols:

1. High risk watercraft and equipment (see earlier definition, page 8) that have not been or can not be decontaminated or meet the quarantined/drying time standard should be excluded from launching.

2. The information obtained from the screening interview, used to determine risk level, should be shared with the watercraft owner/operator and made available on a real-time basis at all access points to prevent excluded watercraft/equipment from attempting to launch from any other access.

NOTE ON WATERCRAFT TRACKING:

A watercraft tracking software program (QID) has been developed by Quagga Inspection Services (see their website, www.info@quaggainspections.com for more information). This system is available for subscription and allows watercraft to be tracked across time and space using boater registration ID numbers and hand-held computer/cell phone technology. It can be used to prevent watercraft that have been excluded for cause from being launched at another access point within the system or for a number of other related applications. *Note: Providing information in this document on the QID does not constitute an endorsement as we have no firsthand experience with this system.*

Standards:

1. Watercraft or equipment that are coming from known zebra/quagga mussel areas in the last 30 days that have not been decontaminated and/or been out of the water for the required time (based on temperature and humidity conditions by either the quarantine time calculator or alternative method recommended here) should be decontaminated if approved facilities are available; placed in self or on-site quarantine for the required time frame; or excluded.

2. Watercraft that are not clean (having attached vegetation, debris or surface deposits that can mask the presence of small mussels), drained (no visible water in any live well, bait well, bilge area, engine compartment, floor or cooler) and dry (no standing water in boat, equipment, trailer, engine) should be decontaminated and/or quarantined or excluded.

IVg. Watercraft Certification/Banding

A number of boating and water management agencies and organizations currently offer some form of certification for watercraft or equipment that have passed inspection, been decontaminated or have remained out of the water long enough to satisfy quarantine/drying time standards. Certification of this type helps the

operator avoid repeated time delays upon reentry and makes it easier for the management agency/organization by reducing work load, processing time and by allowing them to concentrate limited resources on higher risk watercraft. Some groups currently offer a sticker or paper certificate, however, since there is no way to determine where that watercraft or equipment has been between interceptions, this form of certification offers little benefit. Some agencies/organizations (*e.g.*, the States of Idaho, Colorado and several water management agencies in California) have addressed this short-coming by applying "bands" that connect the watercraft/equipment to the trailer so that it cannot be used between interceptions without detection. In some cases, a written certificate is issued with banding.

If agencies and organizations choose to offer certification, we recommend that the watercraft/equipment be banded in such a manner that it can not be launched between interceptions without detection. If banding is coordinated between jurisdictions, further action can be expedited (at the discretion of the implementing agency/organization) at the next launch site anywhere in the western US so long as the tag remains intact. Such a system will reduce the amount of staff and equipment time required at interception facilities region-wide; increasing resource protection, saving money, reducing waiting time and crowding and lowering the frustration level of staff and the boating public.

Protocols:

In order to implement a region-wide program that may be acceptable to most agencies and organizations in the western U.S., three conditions should be met:

1. The agency/organization placing the tag/band must implement all Uniform Minimum Protocols and Standards to insure that the best practical science and technology has been employed in certifying the watercraft or equipment.

2. All agencies and organizations participating in this certification program should use a banding system that attaches the watercraft to the trailer that can not be tampered with or removed without detection. The certification is no longer valid if the band has been tampered with, severed or removed.

3. While a variety of different "band" styles and materials may continue to be used, all tags should have the following features: This information can either be incorporated into the band (which may be difficult) or be provided on an accompanying paper receipt or certificate.

- The name and contact telephone number of the agency/organization applying the tag.

- Some way to indicate the basis for certification as one of the following three categories; inspection, decontamination or quarantine (several options are available including color coding, pre-printed number or letter coding or coding applied at the time of issue).

- The banding date should be indicated on the tag (leaving a blank space for writing in the date of issue with indelible ink on the band or providing a dated "paper" certificate in addition to the banding appear to be the most practical options for this).

Standards:

1. Only watercraft or equipment that have passed inspection or have been decontaminated or quarantined in accordance with all of the Uniform Minimum Protocols and Standards as adopted, should receive certification banding.

2. Certification banding should only be applied by a trained inspector.

3. Watercraft and equipment that have been certified and banded by an agency or organization utilizing these Uniform Minimum Protocols and Standards may receive expedited processing at the discretion of the receiving agency/organization.

V. ADOPTION OPTIONS

After a thorough review and reconciliation process, we recommend that the WRP and other entities (potentially the Western State Boating Administrators Association (WSBAA), the Western Association of Fish and Wildlife Agencies {WAFWA}) and others, adopt and broadly promulgate these protocols and standards for watercraft interception programs in the Western United States.

Following that, a decision needs to be made whether or not to actively or passively pursue adoption of watercraft interception protocols and standards by individual agencies and organizations currently implementing or expected to initiate watercraft interception programs in the near future. We see two reasonable approaches.

If the principles choose the active option, one process may be to appoint an oversight committee of members (from the WRP, and other interested organizations {e.g., WSBAA, WAFWA}) to use contacts developed through the Watercraft Inspection and Decontamination Training Program and the WRP Watercraft Interception Program Assessment to facilitate a process that engages these groups with the goal of refining and agreeing to a regional approach. We believe this would involve regional meetings with groups, negotiation, reconciliation between groups and development of a formal process (potentially through a Memorandum of Agreement between states/jurisdictions) for adoption prior to the 2010 boating season.

A second option could be to formally adopt and promulgate the protocols and standards as a "best practices manual" and encourage their use by all agencies/organizations without the commitment of resources to more actively engage these groups in a dialogue; relying instead on their voluntary adoption and interagency agreements. For example, the State of Idaho has agreed to accept watercraft from Colorado that have been inspected and banded.

We realize the inherent difficulty in implementing a regionally consistent watercraft interception program. Adding to the challenge is that numerous programs are already in place, while others are in the early planning or implementation stages. In some instances, changes to regulations at the local, state and possible federal level may be necessary to implement a comprehensive multijurisdictional program. We therefore encourage continued discussion of ideas and cooperation amongst agencies on this issue and realize that this document is one piece for consideration in tackling a complex issue.

VI. References

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3. Dr. Robert McMahon. University of Texas, Arlington.

4. Wen Baldwin. Lake Mead Boat Owners Association, Boulder City, Nevada.

5. Larry Dalton. Utah Division of Wildlife Resources, Salt Lake City, Utah.

6. Sergeant Eric Anderson and Allen Pleus. Washington Department of Fish and Wildlife, Olympia, Washington.

7. Rob Billerbeck and Gene Seagle, Colorado State Parks, Denver, Colorado.

8. Dominique Norton and Breck McAlexander, California Department of Fish and Game, Sacramento, California.

9. Tom McMahon and Kevin Bergersen, Arizona Game and Fish Department, Phoenix, Arizona.

10. Marshall Pike and Sean Senti, Quagga Inspection Services

11. Stephen Wickstrum, General Manager, Casitas Municipal Water District, Oak View, CA.

12. Scott Smith, United States Geological Service, Seattle, Washington.

13. Paul Heimowitz, United States Fish and Wildlife Service, Portland, Oregon.

14. Ken Kreif, Lake Kahola Zebra Mussel Committee, Kansas.

Watercraft interception program details and manuals were used as references in this document from the following:

1. Arizona Game and Fish Department. Decontamination Procedures – Day Users and Long Term Use & Moored Boats. Phoenix, Arizona.

2. California Department of Fish and Game. 2008. A Guide to Cleaning Boats and Preventing Mussel Damage. Sacramento, California. 20 pp.

3. Casitas Municipal Water District. 2007. Lake Casitas Recreation Area Invasive Species Contamination Threat. Information, Training & Guidelines for Protection of Water Quality. Ventura, California. 33 pp.

4. Colorado Division of Wildlife. 2009. Aquatic Nuisance Species (ANS) Watercraft Inspection Handbook, Official State of Colorado Watercraft Inspection and Decontamination Procedures. Denver, Colorado. 48 pp.

5. Colorado State Parks. 2008. Colorado State Parks Aquatic Nuisance Species (ANS) Inspection and Education Handbook, Version 2. Denver, Colorado. 107 pp.

6. East Bay Municipal Utility District. 2009. Quagga/Zebra Mussel Prevention Program. Oakland, California. 7 pp. http://ebmud.com/services/recreation/quaggazebra_mussel.htm

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9. Metropolitan Water District of Southern California. 2008. Watercraft and Equipment Inspection and Cleaning Procedures for Diamond Valley Lake and Lake Skinner (Draft). Los Angeles, California. 18 pp.

10. Nevada Department of Wildlife. 2008. Aquatic Nuisance Species Prevention and Disinfection Guidelines. Las Vegas, Nevada. 16 pp.

11. Oregon Marine Board. Date Unknown. Angler / Boater Survey Questions and Aquatic Nuisance Species Boat Inspection Form. Salem, Oregon.

12. Oregon State Marine Board, Oregon State Police, Oregon Department of Fish and Wildlife, and County Sheriff Departments. 2008. Quagga/Zebra Mussel, Dreissena Enforcement Strategy & Protocol (Draft). Salem, Oregon. 12 pp.

13. Palmquist, E., J. Granet, and M. Anderson. 2008. Zebra Mussel Prevention at Glen Canyon NRA in 2007. National Park Service, Glen Canyon National Recreation Area. Page, Arizona. 17 pp.

14. Ruth Lake Community Service District. 2009. Watercraft Inspection and Banding Procedures Instructions for Inspectors. Mad River, California. 9 pp.

15. Tahoe Resource Conservation District. Date Unknown. Screening Process for Aquatic Invasive Species and Lake Tahoe Aquatic Invasive Species Watercraft Inspection Form. South Lake Tahoe, California. 3 pp.

16. Utah Division of Wildlife Resources. 2009. How to Decontaminate Your Boat and Mussel-Free Certification. Salt Lake City, Utah. http://wildlife.utah.gov/mussels/decontaminate.php

17. Utah Division of Wildlife Resources. Date Unknown. Requirements to Prevent the Spread of Aquatic Invasive Species (Self Certification Form for Watercraft Owners). Salt Lake City, Utah.

18. Washington Department of Fish and Wildlife, Fish and Wildlife Enforcement. 2009. Invasive Species Vessel Inspection Form. Olympia, Washington.

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VII. Glossary of Terms

Certification - A process whereby watercraft/equipment are determined to present minimal risk based on inspection, decontamination or quarantine/drying time and receive some visible form of certification of that fact (e.g., trailer tag, band, etc.). It is important to note that is not possible to certify watercraft are "free of mussels", only that the most currently available and effective protocols and standards have been applied to kill and remove all visible mussels.

Clean - Absent visible ANS, attached vegetation, dirt, debris or surface deposits including mussel shells or residue on the watercraft, trailer, outdrive or equipment that could mask the presence of attached mussels.

Drained - To the extent practical, all water drained from any live-well, bait-well, storage compartment, bilge area, engine compartment, floor, ballast tank, water storage and delivery system, cooler or other water area of the watercraft, trailer, engine or equipment.

Dry - No visible sign of standing water on or in the watercraft, trailer, engine or equipment.

Decontamination - The process of killing and removing all visible mussels and, to the extent practical, killing all veligers and remaining mussels from every area of watercraft, trailer and equipment.

Exclusion - Not allowing watercraft or equipment to be launched. In extreme cases, exclusion can be applied to all watercraft, but in most cases, is applied to only watercraft and equipment that are considered to be high risk, when other options are not available.

High Risk Waterbody - The determination of "high risk waterbody" is the prerogative of the responsible management entity. Some of the factors used to determine risk potential include:

Whether water quality parameters will support the survival, growth and reproduction of dreissenid mussels

The amount and type of boater use

Proximity to dreissenid positive or suspect waters

Whether the water in question is a headwater, water or power supply system or supports listed species

High Risk Watercraft/Equipment - Any vessel or piece of equipment that has operated on or in any waterbody known or suspected of having zebra or quagga mussels in the past 30 days, or any watercraft or equipment that is not clean, and to the extent practical, drained and dry.

Screening Interview - The screening interview involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk based on the recent history of use. This should be an element of every intervention program that includes individual contact.

Quarantine/Drying Time - The amount of time out of the water required to assure that all mussels and veligers are killed through desiccation. This time requirement varies widely depending on temperature and humidly conditions.

Self-Inspection (Voluntary/Mandatory) - A self-inspection program can be implemented alone or as an "off-hours" adjunct to a more direct and comprehensive inspection program. This type of program involves requiring (mandatory) or requesting (voluntary) the cooperation of individual watercraft operators to complete an inspection of their vessel prior to launching by following a set of instructions and completing a checklist provided at an entry station or kiosk.

Watercraft/Equipment Inspection - Where all or selected watercraft are subjected to a thorough visual and tactile inspection of all exterior and interior surfaces, areas of standing/trapped water, trailer and equipment to determine the presence or likelihood of mussel contamination.

Watercraft Interception Program - Any program which seeks to prevent the spread of Dreissenid mussels and other Aquatic Nuisance Species (ANS) on trailered watercraft or equipment by requiring that they be cleaned, and to the extent practical, drained and dried prior to launching.

Attachment 1: List of Agencies and Organizations Implementing Watercraft Interception Programs in the Western United States.

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Clear Lake, Lake Pillsbury, Indian Valley Reservoir, Highland Springs R, Cache Creek R

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Lake Berryessa, Lake Folsom

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Briones Lake, Lake Chabot, Camanche Reservoir, Lafayette Reservoir, San Pablo Reservoir, Pardee Reservoir, San Leandro Reservoir

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Lake De Valle, Lake Chabot, Contra Loma Reservoir, Quarry lakes

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Anderson Reservoir, Calero Reservoir, Coyote Lake, Stevens Creek Reservoir, Visona Lake, Lexington Reservoir, Uvas Reservoir

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Attachment 2: Utah Division of Wildlife Resources Self Inspection (and Certification) Form.

BOATERS MUST SELF-CERTIFY BEFORE LAUNCHING

Requirements to Prevent the Spread of Aquatic Invasive Species

A. In the last 30 days, has your boat been used, in any of the following waters, at likely affected by quagga or zebra mussels (Rule R657-60):

1. Utah: Electric Lake, Red Fleet Reservoir Yes___ No___
2. Lower Colorado River between Lake Mead & Gulf of California Yes___ No___
3. Lake Mead, Nevada and Arizona Yes___ No___
4. Lake Mohave, Nevada and Arizona Yes___ No___
5. Lake Havasu, Arizona and California Yes___ No___
6. Colorado: Lake Pueblo, Lake Granby, Grand Lake, Shadow Mountain, Willow Creek, Jumbo Reservoir and Tarryall Reservoir Yes___ No___
7. Arizona: Lake Pleasant (Maricopa County) Yes___ No___
8. California: San Justo Reservoir (San Benito County) Yes___ No___
9. Southern California's inland waters in Orange, Riverside, San Diego, Imperial and San Bernardino counties Yes___ No___
10. All waters East of the Rocky Mountains Yes___ No___
11. Other _____ Yes___ No___

If you answered "No" to all questions in Section A, Sign form and Boat is...
If you answered "Yes" to any question, DECONTAMINATE AS DESCRIBED IN SECTION B.

B. Self Decontamination (Rule R657-60)

1. • CLEAN all plants, fish, mussels & mud from boat (discard unused bait in the trash where you fished).
   • DRAIN all water from ballast, bilge, livewell & motor.
   • DRY (7 days Summer; 18 days Spring/Fall or 30 days winter) or freeze (3 days) your equipment. Yes___ No___
2. **Professional Decontamination (Rule R657-60)**
   • Use a professional to apply scalding water (140°F) to wash your boat and trailer and to flush raw water circulation systems. They must sign form.

Decontamination Company _____ Agent Signature _____ Date _____

CERTIFICATE of DECONTAMINATION

I have not used my boat in any waters listed in section A; or
I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Boater Signature _____ Date _____

PLEASE SIGN FOR SIDE OF CERTIFICATE FACING UP ON YOUR DASHBOARD
Certifying false information on this form is unlawful (Rule R657-60)

Boater must fill out a

DECONTAMINATION CERTIFICATION FORM

before launching. IT'S THE LAW!

Notice: It is unlawful (Rule R657-60) to launch a motorboat without first certifying that it has not been in a quagga or zebra mussel infested water within the last 30 days, or that the watercraft has been properly decontaminated. Place filled out certificate on dash board.

After boating, conduct these required decontamination steps:

1 { CLEAN all plants, fish, mussels and mud.
DRAIN all water (bilge, livewells, motor).
DRY (7 days summer, 18 days spring/fall and 30 days winter) or freeze (3 days) all equipment.

or

2 Use a professional to apply scalding water (140°F) to wash your boat and trailer and to flush your motor, bilge and livewells.

Stop Aquatic Hitchhikers!™

Invasive mussels will DEVASTATE boats, fisheries and recreation areas.

If you see these mussels, call 1-800-662-3337

Attachment 3: Example of a boater screening interview form, Crowley Lake Fish Camp - Los Angeles Department of Water & Power.

Los Angeles Department of Water & Power

CROWLEY LAKE FISH CAMP

Crowley Lake - Boat Use Survey

Date: _____ CF#: _____

1. What is your home state? _____ and zip code? _____

2. When was the boat last used (approximately)? _____

3. Where was the boat last used:

   A. Name of last water body: _____

      State: _____ County: _____

      Number of days in water: _____

   B. Name of the second to last water body: _____

      State: _____ County: _____

      Number of days in water: _____

      Approximately how long ago was the boat in this water body? _____

4. Have you removed vegetation and drained any water from the boat since last use?

   ○ Yes ○ No

The above is true and accurate, under penalty of perjury. I voluntarily give permission for any agent of the Los Angeles Department of Water and Power or Crowley Lake Fish Camp to thoroughly inspect the vessel referenced above for invasive species. I understand failure to comply will result in denial of ability to launch the above referenced vessel into Crowley Lake.

Name: _____ Signature: _____

Official Use Only		Inspected by:	
Description:	make and model	Inspection Result:	
Boat			
Vehicle			
Reason Denied	**(circle all that apply)**	WATER	DEBRIS MUSSELS

Attachment 4: Colorado Division of Wildlife and Colorado Division of Parks Watercraft Inspection Form.

State of Colorado

Inspection/Sample #: ☐☐☐ - ☐☐☐☐☐ - ☐☐☐☐☐☐☐
(Water Code / Date (month, day, year) / CL #)

HIGH RISK (ANS) INSPECTION FORM

For use on High Risk Trailered Watercraft

Inspection Location: _____ Date/Time: _____ Water Code: _____

Vessel Registration# (CL#): _____ Vehicle Tag #: _____ Trailer Tag. #: _____

REASON FOR HIGH RISK INSPECTION (check all that apply)

- ☐ Out of state registered or used out of state within last 30 days.
- ☐ Been in infested waters within last 30 days: _____ (Name/State of water). Days since in infested: _____
- ☐ Leaving infested waters after more than 24 hours at an infested reservoir
- ☐ Big/Complex boat ☐ Standing water present ☐ Vol Request ☐ Dirty/Crusty/Slimy below waterline
- ☐ Entering/Leaving marina ☐ Other: _____

VESSEL INSPECTION (Inspect very methodically and carefully)

Overall look and feel of the hull (check box):

☐ Clean/Smooth ☐ Bumpy/Sandpaper feel ☐ Other: _____

(If bumpy/sandpaper feel, then look at bumps with magnifying glass to see if mussels)

☐ **Vessel Exterior Checked**

- ☐ Entire hull
- ☐ Transom
- ☐ Anchors and ropes
- ☐ Water holding pockets
- ☐ Motor well
- ☐ Trim tabs (top and bot.)
- ☐ Transducers
- ☐ Depth sounders
- ☐ Recessed bolts
- ☐ Cavitations plate(s)
- ☐ Through hull fittings
- ☐ Pitot tubes
- ☐ Water intakes/Outlets
- ☐ PWC—foot recesses
- ☐ Lights

Sailboats:

- ☐ Centerboard box
- ☐ Rudder and transom
- ☐ Keel
- ☐ Fittings

☐ **Motor Checked**

- ☐ Exterior housings
- ☐ Propeller and assembly
- ☐ Propeller shaft
- ☐ Prop. shaft supports
- ☐ Propeller guards
- ☐ Rudders
- ☐ Propulsion system
- ☐ Lower unit
- ☐ Gimbel area
- ☐ Water intake/Outlets

☐ **Trailer Checked**

- ☐ Rollers, bunks, pads
- ☐ License plate
- ☐ Trailer lights
- ☐ Trailer wiring
- ☐ Trailer axels
- ☐ Trailer springs
- ☐ Fenders
- ☐ Pockets and hollows
- ☐ Wheels and tires
- ☐ Hangers

☐ **Interior/Equipment Checked**

- ☐ Bait and live wells
- ☐ Internal ballast tanks
- ☐ PFD's
- ☐ Float cushions/belts
- ☐ Rope and equipment lockers
- ☐ Anchors
- ☐ Waterfowl decoys
- ☐ Nets
- ☐ Water skis and ropes
- ☐ Other equipment

☐ **Vessel Thoroughly Drained**

- ☐ Bilge plug or pump
- ☐ Bait and live wells
- ☐ Ballast tanks
- ☐ Drain lower unit on outboard
- ☐ Drain inboard motors fully by pulling plugs.
- ☐ Drain water cooled generators, swamp coolers with plugs
- ☐ Large boats, **ask driver to activate bilge pump.**
- ☐ If **entering** a reservoir with **any** standing water and from infested or out-of-state waters in last 30 days, send to decontamination!
- ☐ If **entering** a reservoir with standing water, require draining. If vessel cannot be drained and has more than 5 gallons, send to decontamination. For lesser volumes of water, assess risk to determine whether to decontaminate.
- ☐ If **leaving**, drain and educate about Clean/Drain/Dry.

☐ **Closeout (If nothing is found)**

- ☐ Ask owner to replace bilge or other plugs
- ☐ Yell "stand clear"
- ☐ Thank them for cleaning/draining/drying

VESSEL INSPECTION FINDINGS (check all that apply)

- ☐ **Did not find** any identified or suspected ANS species
- ☐ **Found:** ☐ Large volume of water ☐ Suspected ANS in water ☐ Mussels ☐ Vegetation
- ☐ Other: _____ ☐ Location(s): _____

INSPECTION COMPLETED IN ACCORDANCE WITH STATE PROCEDURES:

Inspected by (print # and name): _____

Inspected by (signature): _____

24 **Aquatic Nuisance Species (ANS) Watercraft Inspection Handbook**

Attachment 5: Partial List of Decontamination Suppliers.

Power Wash Units and Attachments:

Hydro Engineering, Inc.
865 W 2600 S
Salt Lake City, Utah 84119
Toll Free 1-800-247-8424
Direct 801-972-1181
www.hydroblaster.com

Greenfield Industries
P.O. Box 158
Monarch, Montana 59463
406-236-5549
www.greenfield-insustries.com

Hotsy Cleaning Systems
240 Shearson Crescent, Unit 2
Cambridge, Ontario, Canada N1T 1J6
Toll Free 1-800-265-7146
Direct 519-740-1331
www.hotsyontario.ca

Ben's Cleaner Sales, Inc.
2221 4th Avenue South
Seattle, Washington 98134
877-922-4262
www.benscleaner.com

Hydro Tek Systems, Inc
2353 Almond Avenue
Redlands, CA 92374
(909) 583-9934
(909) 478-3724 fax
www.hydrotek.us

Best Marine Services
(For Power Wash Attachments Only)
12098 W 50th Pl
Wheat Ridge, CO 80033-2038
(303) 423-3311
www.bestmarineservice.com

Banding Supplies:

Christian Wenk, Customer Service
American Casting and Manufacturing Corporation
51 Commercial Street
Plainview, New York 11803
Toll Free 1-800-342-0333 x 117
Direct 516-349-7010
www.americancasting.com

Watercraft Tracking Systems (QID):

Marshal Pike
Quagga Mussel Inspections
2150 Main Street, Suite 5
Red Bluff, California 96080
530-529-1512
mp@calparksco.com

WATERCRAFT INSPECTION AND DECONTAMINATION INTERCEPTION TRAINING FOR ZEBRA/QUAGGA MUSSELS LEVEL ONE

News & Events

WIT

Contact Us

Level One WIT Training

This Level One WIT Training is directed at state, federal and local natural resource and boating agency personnel, water users of all types, law makers, policy makers, and border/ lake inspection personnel, marina operators and commercial boat transport operators.

The Level One training program gives a thorough overview of the species and problems caused, and includes information on outreach and education programs, basic mussel biology, distribution, transport vectors, mussel impacts and focuses on how to inspect for and decontaminate trailered watercraft suspected of having zebra or quagga mussels on-board.

Search for:

Search

ANS Examples

New Zealand Mudsnail

(Potamopyrgus antipodarum)

The Level One training includes 4-5 hours with one instructor utilizing a new two-part education and training video produced for this purpose, a informative presentation on national prevention programs, current issues, lessons learned from existing watercraft inspection programs, a question and answer session and a hands-on watercraft inspection exercise.

The Pacific States Marine Fisheries Commission and its state, federal, tribal and local partners will provide an instructor for this course upon request.

The primary instructor for this training is Bill Zook (See information below). In addition, graduates of Level Two training are also certified as Level One instructors. Click here for a List of WIT Level Two Graduates. You can also find this information in the Training Resources section of this website.

Bill Zook:

Bill is a retired Fisheries Program Manager for the Washington Department of Fish and Wildlife (WDFW) and for the past seven years has worked as a contract consultant for the Pacific States Marine Fisheries Commission responsible for zebra/quagga mussel outreach

and education in the western U.S. With WDFW, he established Washington's Aquatic Nuisance Species Program in the mid-1990's, a program then considered to be the model for the rest of the west. He developed the watercraft inspection and decontamination training program in 2004 and has conducted dozens of trainings since. Bill is the co-author of the Uniform Minimum Protocols and Standards for Watercraft Interception Program for Dreissenid Mussels in the Western United States (see earlier link) recently adopted by the Western Regional Panel of the national Aquatic Nuisance Species Task Force. He lives and works in Olympia Washington.

How to schedule a Level One Training for your organization:

Level One Training is provided at no charge to Federal, State and Local Government agencies for groups of 20 or more and at cost ($500-$1,000 depending on travel costs) for non government organizations.

The agency or organization that hosts a Level One training needs to provide the training facility and is responsible for recruiting and notifying course participants. In addition, the host provides one trailered watercraft for every 10-15 people attending the class that will be

used for the hands-on inspection exercise portion of the training. Click here to find a checklist of responsibilities for agencies and organizations hosting a Level One training. You can calso find this information in the Training Resources section of this website.

Everything else needed for the training is provided by PSMFC and the trainer.

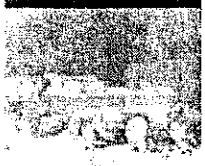
To schedule a Level One training, please contact:

Bill Zook, Pacific States Marine Fisheries Commission

(360) 427-7676

Bjzook2@msn.com

News & Events



WIT

Contact Us

Level Two WIT Training

This two-day, intensive, Level Two hands-on training is provided free of charge on a first-come first-served basis. Attendees will be responsible for their own travel expenses.

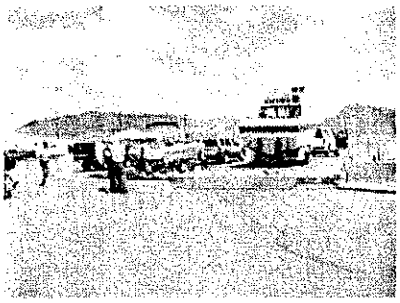
The course is designed for those individuals who are currently or will soon become active in setting-up or implementing watercraft inspection and decontamination programs for their respective agencies, organizations or businesses. The class size is restricted to 10-12 people and the focus is on actual inspections of various types of watercraft and the use of several decontamination systems. It is certified by 100th Meridian member agencies and successful graduates will be qualified as incident responders and Level One trainers.

Search for:

Search

ANS Examples

Chinese Mitten Crab



(Eriocheir sinensis)

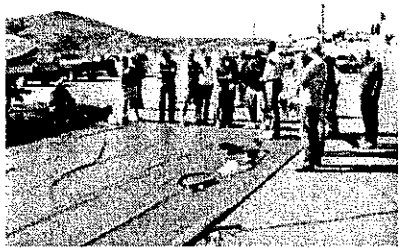
Poses a potential threat to native invertebrates and to the ecological structure of freshwater and brackish estuarine communities

Level two training is delivered over two days (12-14 hours) at Lake Mead located on the Nevada/ Arizona Border near Las Vegas. It will focus on actual field inspection of various types of watercraft leaving the lake which may or may not be contaminated with quagga mussels and the decontamination of those watercraft requiring it. The instruction will include the use of portable (low-cost) temperature controlled power wash units and a large semi-permanent self-contained power washer operated by Callville Marina for the National Park Service.

The primary Trainer for Level Two is Wen Baldwin (See below).

Wen Baldwin:

Wen is the long-time President of the Lake Mead Boat Owners Association and ANS Technical Representative for the Lake Mead National Recreation Area and consultant for natural resource agencies throughout the west. He is generally considered to be the leading expert on the inspection and decontamination of trailered watercraft in the western US. He has inspected hundreds and decontaminated dozens of quagga mussel infested watercraft in the Colorado Basin and conducted more than 30 Level One and Level Two trainings on this topic all over the west. He lives and works in Henderson Nevada.



How to sign-up for a Level Two Training:

All Level Two trainings are held at Lake Mead because of the opportunity afforded by year-round boating activity, infested watercraft and the availability of equipment and facilities. The training is offered at no charge, but each attendee is responsible for their own travel and per diem. Travel to and from the recommended hotel and training sites will be provided.

The next scheduled Level Two Training:

February 22-23, 2011

March 22-23, 2011

April 19-20, 2011

May 3-4, 2011

These trainings are scheduled on an as-needed basis, so please contact Bill Zook for information on future Level Two Training.

General Information and Schedule for Level Two Training:

You will need to book your own rooms and flights.

Recommended Lodging:

Sunset Station Hotel & Casino

1301 West Sunset Rd

Henderson, NV 89014

www.sunsetstation.com

888-786-7389

Rooms are available for $40.00 plus tax per night for the above dates. When making a reservation, mention that you are part of the WIT Responder Training group to get the group rate. Further information and instructions will be provided once you are signed up for the class.

Unfortunately, there is NO airport shuttle available.

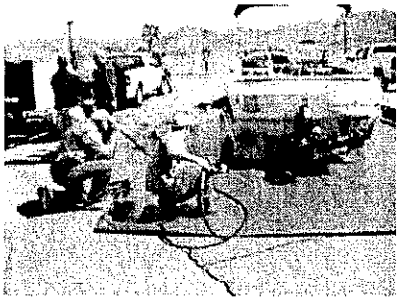
Cab fare runs around $30. If you have difficulty (cost or otherwise) obtaining suitable transportation to your hotel from the airport, contact your instructor and he may be able to coordinate shared cab fare with other trainees arriving around the same time or arrange a shuttle for you.

Transportation to and from the training site:

Transportation to and from The Sunset Station Hotel and the Lake Mead training location will be provided. The van will pick you up at the Sunset Station Hotel at 8:30 AM on day one and 8:00 AM on day two. It will return to the hotel after the day's session is over. A map of the pick-up point and other information will be in your package at registration. For those needing to go right to the airport after Thursday's session, you will be dropped off there instead of the hotel.

The only supplied transportation to and from the training site will be from Sunset Station.

Clothing: Dress for the training should be work clothes. There will be some crawling under boats on both dirt and pavement. You will also be operating hot boat washing equipment on day 2 and could (surely will) get some splash. The instructor will supply everyone with a pair of disposable/reusable coveralls that you can wear if you so desire. Footwear should have non-marking outsoles (so you don't leave marks on the boats while inspecting them) and be able to get wet without being damaged.



Schedule for Level Two Training: (Subject to change)

Lake Mead Watercraft Inspection and Decontamination Training

Responder and Trainer Training – Level Two

Day One:

8:30	AM	Shuttle from Sunset Station Hotel to Lake Mead WSC Water Safety Center – Lake Mead National Recreation Area
9:00	AM	Sign-in, coffee and doughnuts
9:10	AM	Introduction and briefing

9:15	AM	Basic inspection procedures and Q&A period - PP
10:30	AM	Break
10:45	AM	Boat inspection test
12:00	Noon	Lunch at Las Vegas Boat Harbor (Dutch)
1:00	PM	Tour docks to see impact of mussels
2:00	PM	Hands on boat inspections (depending on boat availability)
3:00	PM	Decontamination procedures (What it takes and how) and Q&A period - PP
4:00	PM	Days recap and outline for tomorrow
4:15	PM	Shuttle back to hotel - Have a good evening

Day Two:

8:00	AM	Shuttle from Sunset Station Hotel to Callville Bay Marina
8:45	AM	Briefing
9:00	AM	Hands on boat inspections and decontaminations
12:00	Noon	Lunch at Callville Bay (Dutch)
12:45	PM	More inspection and decontamination at Callville
3:00	PM	Test, Evaluations and Certification hand out
3:45	PM	Shuttle back to hotel and/or airport

To register for Level Two training, please contact:

Bill Zook, Pacific State Marine Fisheries Commission

(360) 427-7676

Bjzook2@msn.com

EXHIBIT B
BUDGET DETAIL AND PAYMENT PROVISIONS
PUBLIC ENTITIES

A. INVOICING AND PAYMENT

Contractor shall submit three copies of the invoice to the State only after receiving written notice of satisfactory completion or acceptance of work by the DWR Contract Manager. **The State will not accept an invoice for work that has not been approved and will return the invoice as a disputed invoice to the Contractor.**

Invoices shall be submitted quarterly, in arrears, bearing the contract number.

Contractor must submit three copies of each invoice to the following address in order to expedite approval and payment:

DWR Accounting Office
Contracts Payable Unit
P.O. Box 942836
Sacramento, California 94236-0001

Undisputed invoices shall be **paid** within 45 days of the date received by the DWR Accounting Office.

B. BUDGET CONTINGENCY CLAUSE

It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no further force and effect. In this event, the State shall have no liability to pay any funds whatsoever to Contractor or to furnish any other considerations under this Agreement and Contractor shall not be obligated to perform any provisions of this Agreement.

If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, the State shall have the option to either: cancel this Agreement with no liability occurring to the State, or offer an Agreement Amendment to Contractor to reflect the reduced amount.

COST SHEET

COUNTY OF LOS ANGELES
QUAGGA MUSSEL INTERCEPTION PROGRAM
PROJECTED EXPENDITURES BY FISCAL YEAR

CASTAIC & PYRAMID LAKES	*FY11-12*	*FY12-13*	*FY13-14*
Personnel Expenses	$560,808	$560,808	$560,808
Services & Supplies (S&S)			
First Year One-Time Expenses	$ 9,514.17		
Ongoing Expenses	$ 35,469.61	$ 35,469.61	$ 35,469.61
TOTAL BY FISCAL YEAR	**$605,791.78**	**$596,277.61**	**$596,277.61**

CONTRACT TOTAL - $1,798,347.00

COUNTY OF LOS ANGELES
QUAGGA MUSSEL INTERCEPTION PROGRAM
PROJECTED STAFF REQUIREMENTS and SERVICES AND SUPPLIES
FISCAL YEAR: July 1- June 30

Personnel Expenses
CASTAIC LAKE

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	Staff Hrs.	Rate	Total Costs
Cashier Clerk	1374	1259	1176	744	660	682	682	672	806	993	1389	1299	11,736	$ 14.29	$ 167,707
Lake Lifeguard	165	112	117	0	0	0	0	0	0	126	150	120	790	$ 22.31	$ 17,625
															$ 185,332
Boating Hours	15 hrs	14 hrs	13 hrs.	12 hrs	11 hrs	11 hrs	11 hrs	11 hrs	13 hrs.	14 hrs	15 hrs	15 hrs			

PYRAMID LAKE

Cashier Clerk	1530	1512	1326	1488	1100	1122	1122	1056	806	1428	1560	1560	15,610	$ 14.29	$ 223,067
Lake Lifeguard	330	224	234	120	0	0	0	0	104	252	300	240	1,804	$ 22.31	$ 40,247
															$ 263,314
Boating Hours	15 hrs	14 hrs	13 hrs.	12 hrs	11 hrs	11 hrs	11 hrs	11 hrs	13 hrs.	14 hrs	15 hrs	15 hrs			

Job Title	Rate
Cashier Clerk	$ 14.29
Lake Lifeguard	$ 22.31

SUB-TOTAL	$ 448,646
25% ADMINISTRATIVE OVERHEAD	$112,162
TOTAL	**$ 560,808**

Services & Supplies (S&S)
CASTAIC & PYRAMID LAKES

			Unit Price	*Total*
First Year One-Time Expenses				
Traffic Cones		120	$ 13.00	$ 1,560.00
Barricades Folding Type 1		25	$ 73.00	$ 1,825.00
Barricades Type A		12	$ 30.00	$ 360.00
Materials for Signs		45	$ 43.25	$ 1,946.25
Flashlights		12	$ 9.00	$ 108.00
3-step rolling ladder stand		6	$170.00	$ 1,020.00
Creeper/Roller to inspect under vessels		5	$ 86.75	$ 433.75
Vehicle Inspection Mirror w' Wheels		6	$ 99.98	$ 599.88
Easy Ups		8	$100.00	$ 800.00
Clipboards		8	$ 2.01	$ 16.08
	SUB-TOTAL			$ 8,668.96
		TAX	9.75%	$ 845.21
	TOTAL			**$ 9,514.17**
Ongoing Expenses				
Package of 1,000 Tags for boats		100	$ 35.00	$ 3,500.00
Polo Shirts		56	$ 20.00	$ 1,120.00
1000 Sheets of Information Printed Material		100	$ 37.00	$ 3,700.00
Box of 12 D Batteries		4	$ 12.00	$ 48.00
Box of Rags		4	$113.00	$ 452.00
Box of Disposable Gloves		25	$ 9.00	$ 225.00
Two-Way CWIRS Radio Service		10	$550.00	$ 5,500.00
24 ct. 1/2 Liter Bottled Water		60	$ 7.02	$ 421.20
Box 12 Pens		8	$ 11.10	$ 88.80
Equipment repair/ replacement				$450.00
Sign Repairs/ Grafitti				$400.00
Housekeeping supplies				$450.00
	SUB-TOTAL			$ 16,355.00
		TAX	9.75%	$ 1,594.61
	SUB-TOTAL			$ 17,949.61
Vehicle Fuel and Maintenance - 64 miles per day (tax included in rate)		23,360	$0.75	$ 17,520.00
	TOTAL			**$ 35,469.61**

EXHIBIT D–Special Terms and Conditions for Department of Water Resources (Local Public Entities - Payables)

1. RESOLUTION OF DISPUTES: In the event of a dispute, Contractor shall file a "Notice of Dispute" with the Director or the Director's Designee within ten (10) days of discovery of the problem. The State and Contractor shall then attempt to negotiate a resolution of such claim and, if appropriate, process an amendment to implement the terms of any such resolution. If the State and Contractor are unable to resolve the dispute, the decision of the Director or the Director's Designee shall be final, unless appealed to a court of competent jurisdiction.

   In the event of a dispute, the language contained within this agreement shall prevail over any other language including that of the bid proposal.

2. PAYMENT RETENTION CLAUSE: Ten percent of any progress payments that may be provided for under this contract shall be withheld per Public Contract Code Section 10346 pending satisfactory completion of all services under the contract.

3. RENEWAL OF CCC: Contractor shall renew the Contractor Certification Clauses or successor documents every (3) years or as changes occur, whichever occurs sooner.

4. AGENCY LIABILITY: The Contractor warrants by execution of this Agreement, that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the State shall, in addition to other remedies provided by law, have the right to annul this Agreement without liability, paying only for the value of the work actually performed, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

5. POTENTIAL SUBCONTRACTORS: Nothing contained in this Agreement or otherwise shall create any contractual relation between the State and any subcontractors, and no subcontract shall relieve the Contractor of its responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the State for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the State's obligation to make payments to the Contractor. As a result, the State shall have no obligation to pay or enforce the payment of any moneys to any subcontractor.

6. SUBCONTRACTING: "Should it be necessary to subcontract for supplemental services or specialists, the Contractor shall obtain prior written consent from DWR. If the subcontracts total more than $50,000 or 25% of the total contract, whichever is less, then the Contractor must certify that the subcontractor has been selected by the Contractor pursuant to a bidding process requiring at least three bids from responsible bidders or pursuant to the procedures set forth in Government Code Section 4525 et seq., as applicable. If Contractor is unable to obtain three competitive bids or three Statement of Qualifications, Contractor shall submit a written explanation to DWR. DWR will then decide whether to seek authorization to allow Contractor to proceed with the proposed subcontract. Contractors shall assure that all administrative fees for subcontracts are reasonable considering the services being provided and the oversight required. Contractor shall only pay overhead charges on the first $25,000 for each subcontract."

7. COMPUTER SOFTWARE: For contracts in which software usage is an essential element of performance under this Agreement, the Contractor certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this contract for the acquisition, operation or maintenance of computer software in violation of copyright laws.

8. REPORT OF RECYCLED CONTENT CERTIFICATION: In accordance with Public Contract Code Sections 12200-12217, et seq. and 12153-12156, et seq. the contractor must complete and return the form DWR 9557, Recycled Content Certification, for each required products to the Department at the conclusion of the services specified in this contract. Form DWR 9557 is attached to this Exhibit and made a part of this contract by this reference.

9. REIMBURSEMENT CLAUSE: If applicable, travel and per diem expenses to be reimbursed under this contract shall be at the same rates the State provides for unrepresented employees in accordance with the provisions of Title 2, Chapter 3, of the California Code of Regulations. Contractor's designated headquarters for the purpose of computing such expenses shall be: N/A.

10. TERMINATION CLAUSE: The State may terminate this contract without cause upon 30 days advance written notice. The Contractor shall be reimbursed for all reasonable expenses incurred up to the date of termination.

11. CONTRACTOR COOPERATION DURING INVESTIGATION: Contractor agrees to cooperate fully in any investigation conducted by or for DWR regarding unsatisfactory work or allegedly unlawful conduct by DWR employees or DWR contractors. The word "cooperate" includes but is not limited to, in a timely manner, making Contractor staff available for interview and Contractor records and documents available for review.

12. CONFLICT OF INTEREST:

    a. Current and Former State Employees: Contractor should be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.

        (1) Current State Employees: (PCC §10410)

            (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.

            (b) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.

        (2) Former State Employees: (PCC §10411)

            (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.

            (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

b. Penalty for Violation:

(a) If the Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC §10420)

c. Members of Boards and Commissions:

(a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e)

d. Representational Conflicts of Interest:

The Contractor must disclose to the DWR Program Manager any activities by contractor or subcontractor personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the contractor fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts:

Contractor should also be aware of the following provisions of Government Code §1090:

"Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity."

f. Prohibition for Consulting Services Contracts:

For consulting services contracts (see PCC §10335.5), the Contractor and any subcontractors (except for subcontractors who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of such a consulting services contract (see PCC §10365.5).

RECYCLED CONTENT CERTIFICATION FORM

To be completed by the vendor/bidder/contractor and returned to:

DEPARTMENT OF WATER RESOURCES.
Recycling Coordinator
Purchasing Services Office
1416 Ninth Street, Room 354, Sacramento, CA 95814
(916) 654-0533 FAX: (916) 653-6543

COMPANY: _____

PERSON COMPLETING FORM: _____

DATE: _____

DESCRIPTION Please include item name, brand, and product number	% POSTCONSUMER	RECYCLED MATERIAL TYPE

All businesses shall certify in writing to the contracting officer or his or her representative the minimum percentage, if not exact percentage, of postconsumer material in the productions, materials, goods, or supplies offered or sold to the state regardless of whether the product meets the minimum content requirements specified in law (see page 2 for minimum content requirements). The certification shall be furnished under penalty of perjury. The certification shall be provided regardless of content, even if the product contains no recycled material. A state agency may waive the certification requirements if the percentage of postconsumer material in the products, materials, good or supplies can be verified in a written advertisement, including, but not limited to, a product label, a catalog, or manufacturer or vendor internet website.

Public Contract Code Sections 12200-12217, et seq. and 12153-12156, et seq.

I certify that the above information is true. I further certify that these environmental claims for recycled content regarding these products are consistent with the Federal Trade Commission's Environmental Marketing Guidelines in accordance with PCC 12404.

NAME OF PERSON COMPLETING FORM	TITLE	AGENCY/COMPANY

➢ _____
SIGNATURE OF PERSON COMPLETING FORM DATE

1. Postconsumer material comes from products that were bought by consumers, used, then recycled. For example: a newspaper that has been purchased and read, next recycled, and then used to make another product would be postconsumer material.

   If the product does not fit into any of the product categories, enter "N/A". Common N/A products include wood products, natural textiles, aggregate, concrete, electronics such as computers, TV, software on a disk or CD, telephone.

2. Product category refers to one of the product categories listed below, into which the reportable purchase falls. For products made from multiple materials, choose the category that comprises most of the product by weight, or volume.

Note: **For reuse or refurbished products, there are no minimum content requirements.**

For additional information visit www.ciwmb.ca.gov/BuyRecycled/

Description Product Categories	Minimum Content Requirement
Paper Products – Recycled	30 percent postconsumer fiber, by fiber weight
Printing and Writing – Recycled	30 percent postconsumer fiber, by fiber weight
Compost, Co-compost, and Mulch – Recycled	80 percent recovered materials i.e., material that would otherwise be normally disposed of in a landfill
Glass – Recycled	10 percent postconsumer, by weight
Re-refined Lubricating Oil – Recycled	70 percent re-refined base oil
Plastic – Recycled	10 percent postconsumer, by weight
Printer or duplication cartridges	a. Have 10 percent postconsumer material, or b. Are purchased as remanufactured, or c. Are backed by a vendor-offered program that will take back the printer cartridges after their useful life and ensure that the cartridges are recycled and comply with the definition of recycled as set forth in Sections 12200-12217, et seq. and 12153-12156, et seq. of the Public Contract Code.
Paint – Recycled	50 percent postconsumer paint (exceptions when 50 percent postconsumer content is not available or is restricted by a local air quality management district, then 10 percent postconsumer content may be substituted)
Antifreeze – Recycled	70 percent postconsumer material
Retreated Tires – Recycled	Use existing casing that has undergone retreading or recapping process in accordance with Public Resource Code (commencing with section 42400).
Tire – Derived – Recycled	50 percent post consumer tires
Metals – Recycled	10 percent postconsumer, by weight